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ABSTRACT

In addition to the special addresses, the proceedings contain speeches on (1) research, (2) intramural athletics, (3) international relations, (4) intercollegiate athletics, (5) the history of sport, (6) teacher education, and (7) basic instruction. The research section includes presentations on computer simulation in athletic performance, manifest anxiety and physical fitness, and the values of physical education. Also presented in the proceedings are the president's report, financial reports, minutes from the last meeting, and reports from the standing committees, the president's committees, and the joint committee. Lists of NCPEAM members, committee members, and officers are included, along with the NCPEAM constitution and by-laws, and a statement on NCPEAM policies. (PCB)

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Proceedings
Annual Meeting
December 27-30, 1969
Chicago, Illinois

National College Physical Education Association for Men

U S DEPARTMENT OF HEALTH
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73rd

NEXT MEETING

December 27-30, 1970

Portland, Oregon

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FOR MEN

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Convention Hotel	Portland Hilton
Convention Dates	December 27-30, 1970

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PRESIDENTIAL ADDRESS

The New Look in University and College Intramurals

David O. Matthews
University of Illinois

The effects of an approximate 7,000,000 pupil enrollment in the universities and colleges of the country are being felt in a number of ways and in many areas on the campuses. Classrooms, dormitories, academic buildings, and recreation facilities never seem to keep up with the demand placed on them by the ever increasing numbers of students. Along with the physical facilities, there is a shortage of qualified personnel to teach classes and supervise programs.

The intramural programs which service the recreational needs of the students are also caught within this maelstrom of expansion and shortages. The lack of facilities and trained supervisory personnel, combined with changing needs and desires of the students, faculty, and staff, are exerting usually subtle but oftentimes drastic influences on the character of intramural programs being offered in institutions of higher education.

In most colleges, the traditional men's intramural program has been one of competitive activities arranged in tournaments primarily for fraternities, dormitories, and student organizations. The popular team sports such as touch football, volleyball, basketball, and softball were interspersed with a few individual activities, e.g., golf, wrestling, and table tennis. Women's programs, where they do exist, follow somewhat the same pattern but with the accent on activities which are not too strenuous or too time consuming.

There are many schools, however, in which the programs are geared to the desires and wishes of the students, and where the directors have looked ahead to the time when the graduates move on to take their place in a working-playing society.

Although there are evidences that interesting changes were taking place in the field of intramurals up to the 1940's, it wasn't until after World War II that startling innovations became the rule rather than the exception. The G.I. Bill afforded millions of veterans the opportunity to secure a college education, thus bringing an unanticipated bulge in college enrollments.

These veterans, many of them married, entered universities with a more serious intent than the hitherto general run of student. Along with a different attitude toward studies, they brought to the college campuses new ideas about what recreation should afford them. The recreation oriented children of these veterans, now living in a time of a huge gross national wealth, are the students we have been servicing during the past five to ten years. They are demanding greater recreation "rights" instead of privileges. These factors, along with the more recent dramatic increase in enrollments, resulting in a very keen competition for admission, grades, and classroom space, have dictated to intramural personnel the kind of program they must design.

Consequently, three *major* emphases have evolved in intramural programming during the last ten years. These are, (1) the scheduling and construction of facilities for informal, self-directed activities, (2) the development of programs of co-recreation sports activities, and (3) a phenomenal interest in and activation of sports clubs.

Regarding the first *emphasis*, whereas many gymnasiums, pools, and play fields *formerly* were closed for student usage on an informal basis early in the evenings, and seldom open on the weekends, men and women program supervisors are increasing the number of hours these facilities are available. It is now common practice in a number of institutions for facilities scheduling to include the hours up to midnight during the week, on Saturdays from nine in the morning to eleven at night, and on Sundays from 1:00 p.m. to 10:00 or 11:00 p.m. for this type of participation.

Fortunately, there is some evidence of a developing tendency to decrease the high priority of varsity teams for university facilities while increasing the priority rating of intramural recreational programming. It is even more heartening to learn of the new buildings being constructed mainly for recreation usage, and to hear of more field space, rinks, and courts being provided for the non-varsity participant.

When it comes to planning new facilities, vociferous students are demanding a greater voice in decision making, especially where student fees pay most of the costs of facilities. They insist that they be given more consideration in determining if new buildings will be constructed and how they will be utilized. Some university administrators have tried to involve students in the planning of new facilities. For example, when the $11,000,000 Intramural-Physical Education Building project at the University of Illinois, Urbana, was in its initial planning stage, a group of students was flown in a University plane to several Big Ten Universities so they could see for themselves what was new in recreation facilities. This same group then asked that it be allowed to formulate a set of policies governing the use of the proposed building, how it was to be financed, and what activity areas were to be included. An acceptable set of student formulated policies on these matters was the culmination of many long and arduous meetings.

This first major emphasis or thrust can be given greater impetus toward enhancement by putting several plans of action into operation. Perhaps the first and most expedient measure which can be taken to improve programming is for the college and university administrators to provide more money to pay student and faculty personnel to supervise the buildings and other recreation facilities so that they can remain open for much longer periods of time. (Some schools keep facilities open until two o'clock in the morning.) Such steps, if taken immediately, should alleviate some of the demands made by students—students who have been raised in a recreation oriented culture—to provide for better facility usage for the non-varsity participant.

The second plan which should be put into effect concerns the construction of recreation buildings and the development of additional play fields which provide opportunities for the student body as well as the faculty and staff to participate in the activities more closely allied with their interests.

Thirdly, physical education and athletic departments should assist in every way possible to improve existing intramural programs. This can be accomplished by adjusting varsity practice time to provide more facilities for intramurals, by providing more funds for intramurals, by providing quality equipment when possible, and by helping the intramural personnel publicize their programs.

The *second major emphasis* that has received a great deal of attention in the intramural picture during the recent past is the co-recreational sports programming that is taking place in many colleges and universities throughout the country.

There are certain sociological pressures that have paved the way for the tremendous increase in acceptance of co-recreational activities. The boys and girls of today are dating earlier, they are given more independence, and the automobile has provided the means for young people to have privacy at a relatively early age; churches are sponsoring boy-girl social clubs, college student marriages are very common, and there has been a decided emphasis on the part of the advertising media to push the idea of boy-girl togetherness. It cannot be denied that the interests of college students are shifting from single-sex activities to co-recreation games and sports.

The success of co-recreational activity programs is exemplified by the numbers of students participating in some of the contests scheduled yearly at the University of Illinois. During the past year, 1968-69, boy-girl *teams* numbered 138 in volleyball, 144 in softball, 60 in tennis, 40 in bowling, and 26 in table tennis.

The success of this program is in no little way dependent upon involving students in decision-making. At Illinois, students play an essential role in the administration of their activities. Managers for the men's and women's programs work together planning and evaluating the co-rec program. These managers keep the director constantly aware of the needs and interests of many students at the University, and the program can, therefore, be arranged to be more appealing to the participants.

Other institutions in the United States offer attractive organized and informal co-recreational activity programs; UCLA, for one, has an excellent program. Perhaps the outstanding example, at the present time, of a university which has *a building and program* dedicated primarily to co-rec participation is Purdue University. In fact, their structure is called the Co-Recreational Gym. We at Illinois have learned a great deal from Purdue and Michigan State University, too, about building construction. Consequently, when the 265,482 gross square feet of the Intramural-Physical Education Building is completed at the University of Illinois, it will be the largest collegiate co-recreation complex of its kind in the world. All areas within the building, with the exception of the locker rooms and exercise rooms, will be open for what we call co-rec play.

The broadening of co-rec efforts to include *all* students, faculty, and staff, and not just undergraduate students, is increasing the popularity of co-recreation programs in institutions of higher education. Organized, as well as unorganized, recreation exists for faculty, married students, and, in some instances, for their children. Since many married students are going through school "on a shoestring," some intramural departments are offering well-directed activities at little or no expense to these persons. The doctoral students often have children old enough to participate in such things as swimming, basket shooting, tennis, and softball. Since graduate students are most often among those individuals who are leading protest movements against athletics of all kinds, it is desirable to solicit their support for intramurals. Faculty support for program development is always needed, and certainly welcome. Programs for them generate goodwill and support for other programs.

The *third major growth emphasis* in intramurals has been the development of sports clubs programs. According to some physical education history books, sports clubs were the forerunners of varsity sports programs in America. These sports clubs also had a very influential effect upon the development of the intramural movement in America. The extremely enthusiastic response in the early 1900's of college students to the contests between clubs inevitably led to necessary faculty control, as evidenced by the formation of intramural departments with full-time directors.

The growth of the "stepchild" varsity programs soon overshadowed the sports club activities until the latter almost disappeared from the college scene, except where they were absorbed into some intramural structures. The limitations of varsity programs, however, have in recent years become quite apparent, and have been a factor in a rejuvenation of interest in sports clubs that is unparalleled in history.

It is quite obvious that as college enrollments have increased by millions the varsity teams have remained practically the same size. There are at most institutions a few hundred varsity and freshman team members who are given the opportunity to participate competitively with teams from other institutions, but at each school there are many hundreds more who desire the same experiences. A considerable number of athletic departments find themselves in dire financial straits as they attempt to carry on intercollegiate competition for as many different teams and sports as possible. Football and basketball must bring in enough gate receipts to pay for the other usually non-revenue producing sports, and in many instances the income is not matching expenditures.

Because of the financial problems which beset athletic directors, there is a natural reluctance to add other team sports to the program. Consequently, the burning desire that exists within many students for some type of intercollegiate competition has contributed greatly to the phenomenal growth of the sports club movement. Evidence of this is revealed in recent surveys which show that over one-half of the universities and colleges in the United States have a competitive sports club program of some type and almost all have some kind of a club program.

While the impetus for renewed interest in sports clubs seems to have stemmed from those students who wished to compete intercollegiately in such sports as soccer, rugby, hockey, and sailing, many thousands more are involved in the organization and operation of clubs that do not compete. These noncompetitive clubs encompass activities such as mountain climbing, canoeing, caving, horseback riding, skiing, scuba and skin diving, and hiking.

Since most intercollegiate athletic departments have been reluctant to assume responsibility for the clubs, it has fallen largely to the intramural directors to try to aid club members in administering their programs. The clubs had to have a "home" and in most instances they turned to, first, the intramural departments, and, second, to the student government associations for advisors and financial assistance.

Intramural supervisory personnel on all campuses have reserved courts, fields, and pools for their own program needs, and they have purchased equipment and supplies for their scheduled activities. It is logical, then, that sports club members have turned to intramural departments for their space and equipment. In most instances, intramural administrators have been very willing to relinquish some facilities and to loan some equipment. However, lack of adequate intramural budgets in almost all schools has made it impossible for the clubs to be subsidized for room, board, and travel for their competitive meet trips. Likewise, certain clubs need quipment that is out of the realm of possibility for intramural departments to purchase. Expensive items such as sailboats, gliders, skeet ranges, sculling shells, and horses must, in most instances, be provided by the clubs.

In spite of many obstacles, students have found ways and means to organize and operate their clubs. There is every indication that this *third major thrust* in intramural program development in the United States is only beginning to receive the attention and help it deserves.

There may be other growth patterns which are emerging from the background of intramurals, but it appears to this writer that new intramural building construction combined with more extensive facility scheduling, co-recreational sports programming, and sports clubs growth, are the three outstanding developments which have come to the fore within the past ten years to give us "the new look in university and college intramurals."

Before I close, I would like first to quote part of Rich Donnelly's President's Address, presented to us in San Diego in 1966, and secondly, voice an opinion of my own. Rich said, "Even though there are trends on some campuses to tear intramurals away from our field, the ties between us are still strong. In many cases where we have lost intramurals, we have nobody to blame but ourselves. Intramurals in many places, even today, take a back seat to the professional and basic programs. We must in our own institutions make them full and equal partners. This means basically an identifiable intramural faculty and budget."

In this speaker's opinion, and he may be biased because of his main area of administrative responsibility, participation is the goal of almost everything we do in physical education. Teacher education programs prepare teachers to go into the schools and colleges to teach skills so that their pupils may learn how to participate. The primary goal of basic instruction programs is to teach skills so that the students are enabled to eventually become participants. Research has proven primarily one thing, and that is that participation is beneficial to the participant. The curriculum for the professional recreation student emphasizes the participation aspect of sports. Athletic programs, although on a higher skill level, are also participation oriented.

Since we find the greatest amount of participation in the intramural programs, it seems to me that one of the most important programs in physical education is that of intramurals.

Institutionalized Values Vs. Real Values: A Look at Nonverbal Behaviors in Classrooms

Charles M. Galloway
The Ohio State University

Our culture is in a state of confusion. The family, the school, the church, the press, the government, and many institutions reflect an uncertainty that is unsurpassed in modern times. It is becoming more and more difficult for the young to recognize and to acquire values which give meaning to life.

To say that the school has a responsibility to rectify the value problem would be to overstate the case. The school, as formalized education, cannot shoulder the full burden of our current value conflict; it simply does not possess the resources. The crisis is too diffuse and elusive for schools to resolve.

But the real dilemma for the school is that it adds to confusion. Refusing to clarify the search for what values are of most worth, the school turns upon itself; it becomes bookish, pseudo-intellectual, and artificial. Rather than teach processes for probing and inquiring into resolutions of value conflict, it insists on its own institutional norms. What values do we foster and how are these values taught? What values do we reflect in our own behavior? What is nonverbal behavior and how does it reveal values?

Behaviors Express Values

Most teachers believe that values are communicated via words. The most prevalent approach is to lecture and to give information. Teachers insist on telling students what to believe and how to act. The teacher upholds the legitimacy of this approach by referring to his greater experience and understanding. But preaching, moralizing, and "bawling out" students simply does not work. Too frequently, the teacher talks when the most appropriate behavior would be to listen. Talking and lecturing achieve poor results as a method for conveying values. The student observes our behaviors and watches what we do as reflections of the values we hold.

For example, a college student walks into a professor's office for a conference, takes a seat, and states his purpose for being there. The professor verbally responds to the student's questions, draws his chair closer to his desk, begins to shuffle exam papers, looks at his watch several times, and speaks in a hurried fashion. The professor insists that he is delighted the student came by his office, but his behavior suggests he wishes the student would leave. The student believes the behaviors, not the words. What a difference there is between that picture and the professor who pushes his chair away from his desk, looks at the student, and appears relaxed. Behaviors do reflect the values we hold for others and for ourselves.

Nonverbal behaviors communicate values without the use of words. In this respect, not only are behaviors as significant as words, they are more significant. Our understanding of values breaks down when we believe that their meanings are in words rather than in people. When human beings behave, they express values. And these values are often more obvious than we realize.

Although facial expressions, postures, gestures, motor activities, dress, and other personal equipment are widely recognized as nonverbal indicators, the definition and implication of nonverbal language is much broader. For instance, something that you don't do can be as significant as something you do. If you would ordinarily expect a person to smile or to laugh after you have told a joke, and they don't, then you have unexpected information. It may have been a poor joke. You may have told it badly. You may have a lead toward understanding the other person's values or perhaps his cultural background. It becomes a bit of datum that you file away with other data, and it makes a difference in subsequent encounters with the person.

Cultural Influences

Nonverbal language is the language of values and realities that are transmitted on silent terms. It is the unspoken culture, understood by all of its inhabitants, and is learned by the give-and-take of human relationships. It reflects the implicit values of a culture, and it expresses attitudes and feelings which may not be obtained by any other means. Expressive behaviors can be more eloquent than words.

The behavior is the thing. It means what it represents. The nonverbal language of the culture is out in the open. Behaviors express specific emotions, feelings, and attitudes. There are countless ways to express greetings and to engage in behavioral communication with friends and relatives. A nonverbal language that has been stabilized conveys a fidelity for communicating effectively which is unsurpassed by words. Being born and reared in a stabilized culture brings with it the accumulation of a nonverbal language peculiar to its origin and development. Every human being learns a nonverbal language.

Because nonverbal languages are influenced by socioeconomic and literacy levels, various language styles can be learned. Given this variation in language development, confusion and misunderstandings can occur even among residents of the same general culture. For example, it may be more difficult for a person of aristocratic origins in England to understand the behavioral language of the cockney culture than it would be for him to understand a German aristocrat. Behaviors reflect values, but values also determine behaviors.

Because of the diversity of his language influences, it is the American who suffers severe misunderstandings. There are tremendous language differences among Americans in their behavioral messages. To travel or to contact persons of different subcultures in our society is to encounter different nonverbal languages. It is far too easy to underestimate these differences. There is a tendency to provide inappropriate cues or to misread the meaning of behavioral language. Similar values can be expressed in different behavioral forms.

Listening styles among children in school may vary considerably. Children from suburban areas have a tendency to maintain eye contact while the teacher is talking. Indian children from various cultural tribes in the Southwest tend to lower their heads and eyes when an adult encounters them vis-a-vis. This behavior is a sign of deference and respect for the adult. It is a behavior that is valued by the culture. What a mistake it would be for a teacher to insist that an Indian child maintain eye contact while the teacher talks. It has repeatedly been observed that students who attend inner city schools are often paying attention when their behavior suggests otherwise. If a teacher has little experience and knowledge of the behavioral language of students, it is natural to impose and to project one's own language on the student. In the face of such barriers to understanding, students withdraw from classroom activity. They view learning as difficult, and they may become alienated from the school.

The nonverbal language of a student arises from cultural influences that have been learned through his own experience. Similar behaviors can also imply different values. A pat on the back to one child may imply friendliness and support, whereas to another child the exact gesture may be interpreted as an aggressive and threatening move. To some students, a proximity to the teacher can stifle and embarrass. Other students may prefer close contacts by the teacher. Cultural expressions among racial, ethnic, and social classes can differ markedly.

Behavioral Cues in the Classroom

Attending school requires the young to learn a nonverbal language of the classroom. Students are rarely taught to raise their hands to get the teacher's attention, to pay attention, to appear busy at their seats, to line up in halls; they are simply expected to comply—to possess the behaviors that nonverbally communicate to teachers that they know how to be students. Young children are not sophisticated performers of expressive behavior. The adults of our culture are far more practiced at managing their behavioral cues to achieve a desired effect. That is why the behaviors of young children appear so unaffected and natural. While much of student behavior is spontaneous and unrehearsed, children soon learn the nonverbal language of the schooling game. And the longer they go to school the better their skills develop. It may be a sad commentary on life that people play games or that students need to learn behavioral skills to fulfill the requirements of schooling, but the name of the game is nonverbal language. To enter the subcultural environment of the school is to be at once confronted with a nonverbal language that may be foreign to the child who comes from a different cultural background. Not only must an improvement be made in verbal skills but in nonverbal skills as well.

Nonverbal Responses

"All right everybody, let's sit up in our seats and pay attention. I'm only going to say this one more time. *Are we listening?*"

Teachers rely heavily on this question to obtain behavioral attention from students. Such a question represents a direct command and is well understood by students.

When it is time to be dismissed for some activity, the teacher prepares and primes students for the act of dismissal. And it occurs in the form of a question: *"Are we ready to go?"*

The intent of the question supplies the requirement of a behavioral response from students. Immediately students sit erect in their chairs and assume a posture of attention and readiness. Some students clasp their hands in a prayerful gesture on their desks as further evidence of their responsiveness. Many behaviors are available to students which can be used to persuade the teacher that their dismissal will occur in an orderly manner. Students learn that such responses work to convince the teacher of their good intentions.

At this point many teachers visually survey the room to detect offenders who have not complied as readily. If a teacher wishes to obtain more conforming responses from students, a second question is usually asked: *"Are we really ready to go?"* After this question students ordinarily contort themselves into rigid figures of marble. This behavior is to suggest to the teacher that they can indeed be trusted to exit with dispatch and order. Now the teacher says, "Okay, row one, row two, . . ." etc.

Although these examples are terribly overstated for many teachers, there is no effort here to demean or criticize. Nor is there an intent to endorse these actions as an exemplary nonverbal language of the school. The point is simple: a nonverbal language exists in the school. Nonverbal information is exchanged by teachers and students during every school day. The question is what kind of nonverbal language should we teach in school and what expectations should we have for student behavior. For those answers will surely dictate the nonverbal language that is learned as a part of school life.

Nonverbal information is transmitted in many ways during classroom instruction. During the process of explaining something difficult to a group of students, it is often quite easy to convey unintentional information. Throughout the explanation, it may be implied that, given any kind of attentive mind and listening ability on the part of the student, everyone should understand, anyone should follow the sheer simplicity of this step-by-step process. This information isn't intended to belittle students, but it implies that students should understand the first time.

After the explanation is completed, the teacher will turn to the class and ask, "*Are there any questions?*" This request for questions is honestly intended to provide students an opportunity to clarify their understanding or to prevent misunderstanding.

For a student to raise a question at this moment would imply not only to his peers but to the teacher as well that he is indeed everything the teacher promised—a dimwit. Students do not ordinarily choose to make such announcements to anyone, much less to the teacher. They remain quiet, and the room remains silent. Now it is assumed that everyone understands the process as well as it was explained. If these conditions are established, it is difficult to pass through the barrier of student resistance to determine who actually needs help and assistance. The words of openness by the teacher may be inviting, but the nonverbal language of the teacher closes the doors of communication.

Nonverbal Events

In any classroom the exchange of messages that are nonverbal in character often plays a more significant role in student learning than the formal teaching that takes place. Throughout a teaching day, there are many occurrences that can be properly classified as nonverbal events. Their impact on the course and direction of classroom activity shapes the contextual meaning that is derived from a situation. Not only do these events minimize verbal messages but they become the very focus of attention and the idea that lingers long after the event has passed. Why this should be so is most difficult to answer, but the character and influence of these events speak for themselves.

Use of Space. Classrooms are usually divided into territories where a teacher and students occupy space. Some arrangements of territorial rights are traditional, with the teacher's desk at the front of the room and students seated in rows. Other arrangements of desks and furniture are more imaginative. Some uses of space are fluid, others are static. A change in a spatial arrangement influences the potential meaning of a learning context.

Teacher Travel. Where and when a teacher chooses to travel in a classroom signifies meaning. In the past, teachers moved around their desk as if it were an isle of security. They rarely ventured into the territories of student residence unless they wished to check or monitor seatwork. To move forward or away from students signifies relationships.

Use of Time. How teachers use their time indicates the value and importance they place on something. Indeed, spending little time on a topic or passing by it can indicate no interest in or knowledge about the topic. Teachers do not ordinarily recognize the meaning of their use of time. For instance, students can frequently relate what a teacher's preferences are and what the teacher dislikes.

Control Maneuvers. Teachers engage in various nonverbal tactics to control the behavior of students. These silent expressions serve as singular events to remind students of teacher expectations. A few examples should suffice to capture the essence of these nonverbal maneuvers by teachers: indicates inability to hear due to classroom noise; places finger to lips; stands with hands on hips and stares in silence; scans room to see who is not working; records in grade book while student reports; raises brow or uses eyes to gain attention.

Classroom Life

The effects of nonverbal influences in classroom life is an idea that is beginning to receive widespread attention. Until now these effects and influences have seldom been recognized in specific ways. Improving the act of teaching in a classroom implies the need to be aware of nonverbal cues and events, for many classroom phenomena serve as communicators of values. As the teacher works to establish better classroom learning, it is important to realize that nonverbal meanings make lasting impressions. Especially is this true when a contradiction exists between words and actions. When an incronguity occurs, it is the nonverbal effects that are accepted as valid. It is the consequence of nonverbal influence that reflects values.

To concern ourselves with nonverbal communication is to take an attitude toward the importance of what people do rather than what they say. It stresses the how of communication rather than the what. It means that behavior is more significant than words. It highlights the function of attitudes and feelings and makes them an important part of the content of communication. It is an attitude toward self and others that becomes a rigorous taskmaster, for the requirements of taking nonverbal cues seriously implies a willingness to be sensitive to self and others and to act intelligently. This activity of mind and body is ever present in the orientation and attitude one brings in any interpersonal situation and observational context. Above all it frees the person to understand more meaningfully and to accept more openly the difficulties of what it means to be human in any cultural setting. By having more data, rather than less, the person is free to behave in his own best interests and to enable others to do likewise.

The Education and Social Problems of the Modern Large City

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This is indeed a moment of particular pleasure to have been invited to speak to this august body of men, whom I regard as being in positions of leadership. You are in positions of leadership because you are afforded the opportunities of coming into direct contact with our youth. There are few individuals who have a direct effect upon people who are in their formative stages, as you are. Who are the other people who have this opportunity to mould our youth into productive adults? They are the youth's Mother and Father, their Minister, Priest or Rabbi and their Teacher. Each has their peculiar role, each can miss the opportunity to influence, the Mother by not being a warm, loving and exemplary woman, the Father by not showing interest in the child and not spending time with him, the Minister by being too abstract in his sermons and not making religion relevant to this growing human being, and you his physical education instructor and coach, by not giving him some individual attention, encouragement and guidance in and off the field. We recognize that we, as physical education instructors and coaches, have a greater influence on some youths than his Mother, Father or religious leader, for the youth in many instances look upon you as the personification of manhood and womanhood.

In my judgment, it is imperative that Doctors adhere to the oath of Socrates, the Lawyer adhere to the canons of ethics, the Minister to the teaching of God's word, and you to adhere to the development of the physical body, keeping ever present in mind the often quoted expression: *"MENS SANA IN CORPORE SANO,"* a sound mind in a sound body.

To achieve our goal, we must know the individual and the social forces that are a part of his environment. If there is one word that describes this world, that word is *"UNREST"* and if there is one word that describes this world, that word is *"UNREST"* and if there is one statement that sums up this condition, it is that nothing remains the same. America was founded on unrest, a determination to bring about a change. An acceptance of the challenge to move ahead for each present and future generation.

America is undergoing a complete re-evaluation by her youth, by her aged, by her ethnic groups, even her theologians. May I pause at this point to ask if the people in physical education are also listed among those making new evaluations? Nowhere in the history of this nation has the social, economic, educational and political structures been under such examination and attack as they are today.

The current social revolution in the minds of Americans is created by these re-evaluations, revelations and re-examinations. The new wind blowing across the prairie has howled through the colleges, into the cities, even into the suburbs and farms of our country. The old guard, those who wittingly or unwittingly, try to hold back the dawn, these people who consistently place property rights above human rights: these are the individuals who are running for cover. They do not know how to approach the *NOW* generation because they are buried in the *WHEN* past.

Being cognizant of the present youth revolution, do we rationalize our resistance to change by cataloging these protestors as being radicals and then proceed to ignore a large segment of our youth, a segment that once was a part of the physical development group? Do we further rationalize by believing that all of the protestors are communist or communist sympathizers? Or rather, do we look at this group of militants as being dissatisfied with the faults, inadequacies, injustices to man and immorality of our present adult generation? Why not view this group as wanting a society based upon love, justice for all, with no exceptions. Sure, in the youth's quest for a better society, they are guilty of many extreme faults. They are being used by those who have a vested interest in completely disrupting our country.

I submit to you, the responsibility for reducing violent unruly demonstrations is peculiarly ours, ours to remove the imperfections of our society. We must first stop viewing people as belonging to different racial and ethnic groups and view them as individuals.

Perhaps at this point in my presentation, you may be saying, he is not talking to me. I raise but one question. Are many of our youth being influenced to believe that it is a waste of valuable time to participate in physical education programs and sports? The answer is very definitely, yes.

Do we accept the challenge to change this attitude by seeking the answers? Oh, yes, I am cognizant that we have more youth participating in physical education and sports: that we have applied research and scientific knowledge of the body to our youth, that many more adults are participating in physical development, for example, jogging, walking, sports, etc.

I return to the challenge. What are we doing about the problem of too many of our youth using stimulating drugs, marijuana, pep pills, narcotics in various forms and promiscuous sex. These are not the youth who are participating in activities that will develop a strong body.

Where do we find these youths that we need to reach? We find them predominantly in our large cities. Approximately 60% of the population in America lives in large cities. It is my analysis that we will find when the 1970 census is taken that two-thirds of our population are living in large cities. The internal problems are therefore to be found in the metropolitan areas.

Again, I submit to you that while the majority of our youth are in large cities, the problem does not stop at the city limits. For our youth are communicating to one another, whether they are in the large cities, suburbs or on the farm. Too frequently this dialogue between our youth does not set the stage for their wholesome development, and thus, is a detriment to youth developing properly to take the reins of adult leadership in our society.

Yes, the educational and social problems of the modern city today are many and varied. We think of the future and of our greatest commodity, the young people throughout the United States. We have heard about the problems they create. If we stop to realize that we have more young people in our world today than ever before, if we look at this country of ours, we will find that the majority of citizens are our young people and they are increasing in percentage. In their development, we must be able to give them a program that is acceptable to an increasing larger number of youth.

Let's compare a youth's development to an automobile. If in our thinking we are going to put the emphasis upon the physical being then we develop a great body with a poor engine. We have half an automobile, and by the same token, if we develop the mind and neglect the body, we still have half an automobile with a great engine and poor body.

Much of what I am today, my ideals, goals, determination, my respect for the rights of individuals, not only came from my training on the field, but from making trips in the car of my high school coach. Pop Hartmann talked to us individually and collectively. Con Jennings was a great philsopher who loved his athletes. I looked upon him as a Father. Bus Schemik was always helpful and jovial but always stern.

I've had the opportunity of visiting many schools throughout our country and have seen many programs in action. In all too many cases, the teacher throws up a basketball and retires to the side lines and the children are running up and down the court with the basketball, apparently without direction. Where are the mats today, the bucks, the ropes to climb, where has the art of gymnastics gone? This is one event that teaches coordination, poise and the sense of direction.

One of our major problems is that entirely too many teachers and administrators of academics do not realize the importance of physical education. This anti-physical development and sports attitude by the academics was prevalent during the change of the century and is today one of the greatest detriments to full recognition of the importance of this type of education for the full development of man. P.E. men and women must fight for the proper recognition. Our youth in elementary schools are not taught how to play. Their knowledge of games is extremely limited. They are absolutely lost if they do not have a ball to play with. Without a ball, what do they do? They throw; throw rocks at each other and everything, including windows.

I recognize that all of the responsibility for developing the complete child should not be placed on the shoulders of the men and women who have the responsibility of moulding the total child. Our whole system of education needs changing. For us to develop an individual, that person needs to have sufficient intelligence to comprehend instructions and then making these instructions a part of his physical development.

I am of the opinion that too much emphasis is placed on the price tag of winning. I feel that in this area of development the student should be given a code of ethics for him to live by, to teach him to respect the rights and property of others and teach him to play the game of life, as well as the game of athletics, according to the rules of our society in which we live.

If we agree that we cannot develop apart, then we must strive to develop together. No segment of a community can be neglected. We must put the greatest program where there is the greatest need. I ask you to research your area and determine if any part of that area is being neglected.

I live in the so-called ghetto now. I have always lived in the ghetto. This same but enlarged black community has fewer recreational services today than they had over forty years ago. What can you expect from the youth of the black community? Who is to blame for the failures of the youth in these areas? Is it any wonder why the youth of the black community is frustrated, bitter and anti-social. Should not we share some of this blame?

And so in this era today, education and the social problems of our modern city gives to you a tremendous burden of responsibility. We should work in the area of the school and try to provide a greater understanding with the people of the community and the importance in all fields including recreation. If the community itself can see and feel the effects of such a program then we would eliminate the many thousands of excuses from parents that would try to get little Johnny and little Mary excused from gym. Many of the excuses come because neither one of the children has the coordination or the skills to compete with his fellow student. This is why your job as a teacher of these skills become so important to the development of our nation.

As a teacher, and many instances a coach, I would like to be able to remind you once again of the silent oath you took as you walked across the platform to receive your degree. Every teacher should feel that the subject matter in which he teaches is the most important in the institution of learning. One should never compromise the position he holds.

Gentlemen, I know so well that if it hadn't been for athletics, I wouldn't have a college education. Yes, the social problems of a modern city are many and varied, but I feel with the full meaning and the responsibility of dedicated people in the field of physical education, we can develop and give to this nation a greater person to fulfill the leadership of those of us that will soon pass on. To me this life of ours is much like the relay teams I have been a part of. As long as we practice passing the baton to the runner ahead of us and knowing that this man will run as fast as he can because he has been trained properly, the speed that each runner has given the team would make the team unbeatable. So, to you I say, practice passing the baton of life to the youth of our land and with this practice we will get leadership that this world has never known. Do you know what the challenge is? Do you accept the challenge?

Student Power - Student Policy Boards and Advisory Committees

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The title of Student Policy Boards and Advisory Committees suggests two separate but interrelated subjects when one looks at definitions of the words policy and advisory. Policy by definition is a definite course of action selected from among alternatives to guide present and future decisions whereas advisory is defined as presenting various alternatives from which someone in authority will select one or more for action. Therefore intramural policy boards determine the course a program will take by selecting from among available alternatives while intramural advisory committees develop the various alternatives from which a selection can be made. It is clear that policy boards basically have more authority although advisory committees may well be very influential and persuasive. With these definitions in mind let us pursue the topic of student involvement on such boards and committees.

Control of Intramurals

There is considerable disagreement among intramural personnel as to how much authority should be given to students for administering and controlling programs. Indeed some would suggest the absolute on both sides of the question; that is, there are those who would support complete student control and those who feel that programs can best be run without interference from students albeit their numbers are small or they are extremely quiet. The question of student involvement becomes more important in light of the present situation on college campuses where students are demanding and receiving a greater voice in the administration of all educational programs. Now as never before administrators are reviewing their programs to determine whether changes are appropriate and many are seeking a rationale for changes. This leads us to identify the salient points which have been used to support both sides of this question of student involvement on policy and advisory boards.

Student Control

Proponents of student involvement argue that one of the objectives of education is to provide leadership opportunities to students and that one way this can be accomplished is by having them serve on advisory or policy making boards. The assumption is that the best way to teach responsibility is to give responsibility. Furthermore, this responsibility should apply to real rather than contrived situations. Giving direction to an intramural program can provide these decision making opportunities. Although mistakes will be made the adjustments necessary to correct them are also thought to be part of the learning process.

It is also suggested that students have a better understanding of what other students want in a program and therefore can add significantly to program development by serving on boards. In addition it is thought that disagreement by participants with student determined policy is easier to deal with than policy determined by administrators. The participant believes he is in a better position to change student determined policy either by influencing student members on the board or by becoming a member himself. With this attitude the participant is more apt to accept decisions which are handed down by his peers.

Another argument for student involvement is that the make-up of the boards will be constantly changing thereby allowing for an infusion of new ideas and more frequent review of established policies.

Faculty Control

Opponents of student involvement on policy and advisory boards argue that the basic purpose of intramurals is to provide a service to the participant in the form of satisfying sports experiences and that this can best be accomplished by professional personnel. They contend that it is not the purpose of intramurals to train intramural workers, therefore participants should not have to suffer while a few students profit from administrative mistakes which are made because of inexperience. Opponents of student involvement further suggest that students often do not possess the mature judgment required in selecting from alternatives or settling controversial issues. In addition students are often subject to academic pressures which may reduce their effectiveness in serving on boards or committees either by a redirection of their interests or by absenteeism.

Another point against student involvement is that there is very little continuity in the program development since students are seldom with the policy or advisory groups for an extended period of time.

Although not complete the points presented above tend to reflect the kinds of arguments one would advance if he were attempting to support either side of the question of student participation on policy boards and advisory committees.

Moderate View

A more popular or practical position on the matter would be one of moderation. This position recognizes that student membership on policy and advisory boards is educationally sound and should be made available provided that certain safeguards are built into the system to allow the administration to have control over the final decision. In most cases this is accomplished by maintaining a numerical majority particularly on policy boards. Advisory boards may not have this built in majority since their actions are not necessarily adopted by those in authority.

Student involvement in this manner, it is argued, allows students to be a part of the program development and become familiar with policy making procedures at an administrative level normally not available to them. It further protects the participants from decisions which may be inappropriate due to the inexperience of the students since the professional administrators would supposedly correct these decisions at the board level.

Probably the most important asset of having both students and administrators on the boards is that it allows for an exchange of ideas between the two groups at a level where action is possible. The combined group also suggests some continuity since the permanent staff would tend to be long time members who could then take advantage of the different ideas which would doubtless come from each new group of students.

The moderate view then attempts to draw the most appropriate points from both sides while leaving ultimate control with the administration.

Thus we have readily identified at least three positions with regard to student participation on policy boards and advisory committees. To attempt to suggest that any of the three is appropriate for all schools would be ludicrous. Rather it seems that decisions concerning the advisability of student involvement at the policy making level will be up to each director using, not so much the reasons presented in this paper, but such other important considerations as what the Dean or President wants and whether or not the director enjoys tenure.

Student Power in a Positive Direction – A Student Manager Program

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The "soaring sixties" have certainly been an era of change within our colleges and universities as many different forms of student activity have taken place. Students have become involved in protests against the Vietnam War, the pollution of our environment, racial discrimination, and various issues of campus governance. At no other time in our history have college students expressed such an intense desire to become involved in questioning the established traditions and confronting the administrative structures of our nation.

A main focus of this involvement has occurred within the university. Students are not only asking, but in many instances, demanding a change and a voice in the administration of academic and service programs. Teach-ins, sit-ins, and other demonstrations of dissatisfaction have been used when normal channels of communication become closed or otherwise ineffective in promoting and maintaining dialogue between the students, faculty and administration.

Intramural administrators, because they are involved in providing a popular recreation service to the students, have long believed that their programs are somewhat immune to the various forms of student protest. "They would never dream of sitting in at the intramural office, it's unheard of!" is the general response to a question concerning student protests and intramurals. However, the day has now arrived when such protests can and do occur. I cite the recent boycott by the intramural touch football teams at the University of California, Berkeley, when they refused to play their scheduled games at the newly turfed fields which comprise the controversial "Peoples Park." This is a direct result of a situation which occurs when communications break down between the students and the administration planning processes of the university. Some form of student representation and voice within our intramural program structure must be created and used to communicate with the higher administration on major decisions concerning intramurals.

I personally believe that no finer form of student representation exists than that of a student manager program. Originally, student manager programs were established primarily to assist an intramural administrator with the operation of the program because of inadequate staffing. However, in addition to aiding in the performance of work duties, the students can provide the program with student oriented direction since the student managers reflect the thinking of many of their fellow students. As intramural administrators we must strive to keep in touch with individuals we serve and what better means can be found than by having them work side by side with us. Such cooperation aids in developing mutual understanding and respect.

To be effective, an intramural manager must be properly trained. His training should include a complete orientation into the philosophy of intramurals, its relationship to the entire educational function of the university and a thorough indoctrination into the operation of the intramural program at that particular school. Once trained, the intramural manager becomes invaluable in the operation of the intramural program.

There is no one best form of intramural manager program. Each school should develop its program to meet its particular needs and structure. The University of Illinois, Urbana, utilizes a student manager program in the operation of its Men's Intramural Activities Program. Approximately twenty-five students annually participate in the program as student managers. There are positions for sixteen sophomores, six juniors, and three seniors. Selection of new managers and their promotion to the next level is conducted by the managers themselves. Thus the students are given complete control of the manager program and the intramural administrator acts as an advisor to the students. The manager program is entirely voluntary and only at the senior level is a monetary award of $100.00 given to each senior manager. Each sophomore is given the responsibility for conducting one non-point sport while each junior is responsible for conducting two point sports annually. The seniors divide their responsibilties into three areas, program, policy, and publicity and in general assist the Men's Intramural Supervisor in overseeing the entire operation of the other managers and the program. In addition, all managers act as members of the Intramural Protest Board and the juniors and seniors also act as members of the Intramural Policy Board.

There are three major advantages of a student manager program. The first advantage is the saving of finances. With the increase in student enrollment and participation in intramurals, the intramural staff or director, whichever is the case, is often severely taxed to meet the work required to conduct a quality intramural program. Since budgets are strict and funds are often unavailable for new staff, an intramural manager program can provide the manpower to absorb the work load of from one to two additional staff members at a savings in the area of from $10,000 to $20,000. Such procedures as publicity, the taking of entries, scheduling, recording results, and presenting awards can all be enthusiastically and efficiently performed by well trained student managers.

The second advantage is the fostering of student support for, and involvement in, the intramural program. As managers are introduced to the operations of the intramural program and correspondingly become involved in the decision making process, they develop a positive attitude toward the aims and goals of the program and in turn give it their support. It is often quite difficult to evaluate the strength of such support until you seek student backing for the construction of a new recreational facility or a fee increase for expanded recreational services. This is the true test of the amount of student involvement and support in your program. At the Universities of Illinois, Michigan State and Purdue it was student support which was the key to unlocking the door for the planning and/or construction of new facilities. Similar facilities have also been constructed at the University of Washington and the University of Utah. Such student support does not grow overnight but is cultivated through various programs aimed at bringing the students into the operation of the intramural program.

The third advantage is the growth of increased communication between the intramural department and the students. Student managers serve as effective spokesmen for the department as they communicate the various policies, rules and regulations, and decisions which they themselves formulated. Their decisions on protest and policy boards are more readily accepted by their peers. Also, the student is most often the best judge of the opinions of his fellow students since he samples them in his everyday contacts with his classmates.

In summary, I believe that we as intramural administrators have a duty to give today's students an opportunity to involve themselves in our programs. Our departments and programs are generally ideally suited to give the student an opportunity to develop his skills of leadership and responsibility. We have a golden opportunity to lead instead of follow in the development of new and exciting programs to bring out the creative best in today's college students. Through a student manager program we can truly put student power to work in a positive direction for the betterment of not only our program and our university but for the betterment of the man, himself.

Student Power and Student Administered Programs

John A. Colgate
Western Illinois University

In this day of rapid changing pattern in education, it is very important that the intramural programs be prepared to assist in providing intramural activities which are student oriented and student structured. Not only is there a great demand upon the time and facilities of the existing intramural programs, but also a great need for providing additional activities outside of the regularly scheduled program.

At Western Illinois University, we have found that by working with the student organizations such as the University Union Board, Residence Hall Councils and the Intrafraternities Council, the program has taken on a wider scope by providing additional intramural type activities for the students.

In order to assist with the student administration program, the Intramural Department serves five main functions.

1. *Provide common rules.* By using the intramural rules, students are able to compete and conduct their own tournaments based upon these rules. Therefore, if the students are playing under the common rules and there is a difference in regard to rule interpretation, they often times will use the intramural office as the rule interpreter for them. Although student programs are run by students, they would just as soon have this type of administrative decision lifted from their shoulders.
2. *Equipment check out.* The Intramural Department should be willing to provide and check out all of the equipment necessary to conduct the other activities, providing that the use of this equipment does not hamper the already regularly scheduled university intramural program. For example, we keep all of our equipment for our touch football in travelling bags. This equipment includes footballs, officials jerseys, team jerseys, and goalline flags. Student organizations wishing to conduct tournaments on a weekend may check out this equipment as soon as the regularly scheduled program is completed on Friday afternoons. All other intramural equipment is made available to students to check out by presenting an identification card.
3. *Facilities schdules.* One of the biggest responsibilities for the intramural department must take towards the outside programs, is the scheduling of the facilities for the conducting of these programs. Our department not only provides the schedule for our gymnasium and recreation areas, but we also work very closely with the University Laboratory School and the ROTC in trying to provide additional gymnasium spaces so that the students may conduct their programs.

4. *Tournament drawings.* Although students are very much interested in conducting their own tournaments, they often times lack the knowledge and the insight into the actual working of tournaments. Many times, they will try to conduct tournaments during a single day in which they cannot only provide for additional activities, but determine a championship. Therefore, it is very important that these services be provided so that the student can conduct their tournaments on a well run basis.
5. *Intramural Records.* The Intramural Department at Western Illinois University also provides assistance to the student run programs by making available the records to the various organizations so that they can conduct their own internal programs. For example, the Intrafraternity Council at Western Illinois University awards league championship and team championships in a great number of the events which are conducted by the Intramural Department. Although a fraternity may not win the All-University Championship, they can win the Intrafraternity in the Intramural championship. The Intrafraternity Council also determines an All-Sports Championship by using selected activities which are conducted by the Intramural Department.

One of the greatest advantages of the student administrative intramural program is the fact that in most cases, these students are working with a smaller and more homogeneous group of students; therefore, it has a great social value and a cohesive force among the Residence Halls and Fraternities.

In closing, let me say that the emergence of student power is nothing new in good intramural programs. For many years we have been under staffed and our programs have been run and practically administered by students. The only thing that seems to be of importance today is the fact that the students want the individual recognition of conducting their own separate programs. I do feel that student power or student managed programs are a great assist to the established university intramural programs.

RESEARCH

Computer Simulation in Athletic Performance

Stephen Kahne
John Salasin
University of Minnesota

Simulation is a technique often used in the study of systems, be they physical, economic, or social. Before discussing the possible applications of the technique to athletic performance, it might be useful to clarify exactly what we mean by the term "simulation."

A satisfactory definition is that given by M. E. McCoy, Jr., in which he states:

> Simulation is the act of representing some aspects of the real world by numbers or symbols which may be easily manipulated to facilitate their study.[1]

If we define simulation as the "act of representing the real world," we can refer to a model, which is our representation of the real world or of the relationships between the variables of interest. Our model is usually mathematical in nature for two reasons. First, many aspects of the real world may be expressed mathematically and, second, it is relatively easy to work with a mathematical model to ascertain system behavior.

An example might serve to further clarify this concept of simulation, or mathematical model building, and to contrast it with a statistical study. Let's consider a study of automobile accident fatalities. Through a statistical study, we can gain some insight into relevant parameters. Examining accident records can give us an idea of the influence of drinking on the accident rate, or on the number of lives which might be saved if all individuals buckled their seat belts.

Different, but related, questions are involved in the design of a safe car. We might wish to determine, for example, exactly how strong a seat belt should be, or, in other words, how much force is exerted on it during an accident. A similar inquiry would be to determine the resiliency of a dashboard required to prevent a head from cracking when it collides with the dashboard at 60 mph.

The automobile manufacturers might, over a period of years, construct cars with various strength seatbelts and dashboard resiliencies and collect data for statistical analysis. I'm sure that none of us would like to be included in the sampling for this experiment.

A more practical alternative is to model the situation. We can obviously build a physical model by crashing cars containing dummys and measuring instruments into a wall at various angles and speeds. While this physical model could give us the desired information, it would be quite time consuming and expensive. Fortunately, a body crashing into a dashboard obeys the well known laws of physics and so can be modeled mathematically for computer simulations.

Some of the advantages of computer modeling should be evident from this example. We see that in many situations it is quicker and far cheaper than other methods of analysis. We are not constrained to study only systems which are in existence, but can vary the parameters or quantities of interest, of the model to include any possible combination of seat belts and padding. We can "optimize" the system, using, if we wish, parameters outside the realizable range. We could, for example, study the case of a body completely surrounded by foam to get an indication of the efficacy of ultimate padding. Optimization is a central concept to our discussion, for what we are really interested in is the optimization of performance in an athletic event, given the constraints of the human body. Before going into any detailed discussion of optimization, however, it might be worthwhile to look at situations where computer simulation might prove useful.

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[1] John McLeod, ed., *Simulation* (New York: McGraw-Hill, 1968), p. 3.

The recent moon flights provide an example of simulation activity. NASA was faced with the problem of having to be sure that a physical system, containing millions of component parts, worked perfectly the first time. A design error could be expensive in time, money, and lives. Modeling was employed in the design phases to ensure that the components of the rocket and guidance systems would perform their functions properly, and to guarantee that the separate parts, designed and built by separate subcontractors, would function together. The mission was simulated, or modeled on a computer many times before it was actually run. The astronauts were trained in a "simulator." A mockup of the space capsule was connected to a computer, which simulated the flight. While remaining on the ground, the astronauts could practice flying the entire mission—lacking only the experience of weightlessness.

The use of simulation in studying a high jump might be an application more pertinent to physical education. It is our understanding that some conflict has arisen as to whether it is "better" to go over a high-jump bar forward or backward. Stating this more definitely, with which technique would the same person, trained optimally in *both* techniques, be able to jump higher.

As most coaches will probably agree, there is an intrinsic difficulty in training the same individual to perform the same act in two different ways, with optimal performance in both. This would be especially true if the muscle movements learned with the first method "carried-over" to the second.

If we assume that adequate mathematical models exist for the description of human movement, and a movie to be presented later indicates they do, we could model the high jump on a computer, using both techniques and assigning the jumper the same muscle strength and reaction times in both cases. With each model we can vary the point and angle of take-off, the strength of push-off, and the various rolls and twists involved, so as to achieve optimum performance in each case. We would hopefully gain an objective answer to the question posed, which high jump technique is preferable for an individual with the muscle strengths and reaction times posted.

The concept of simulation we have been developing is really quite straightforward. Given an event in the real world which we wish to study, we build a model of the event and study the model. To make our task easier, we make the model mathematical rather than physical and use a computer to aid us in our study. The rational for using simulation is strictly pragmatic—with this technique we can conduct investigations that would be unfeasible using another approach.

Let us now discuss the procedures we might go through in optimizing a physical activity, in determining a "best" or "better" way of performing an athletic event. The process can be broken down into four steps.

First, of course, is the identification of the physical problem. This is usually expressed in words rather than in mathematical symbols. For the high jump case we might say: Given an athlete, or model of an athlete, what movements must be made at what times to allow the highest jump possible? If we are talking to an engineer or mathematician we must go further and stipulate exactly how the height of the jump is measured, i.e., by considering the lowest portion of the jumper's body during the time it is above the bar.

Second, we need a mathematical description of the system or systems. These tend to be relatively simple because this makes them easier to work with, but the parameters involved must be related to parameters in the real world. Thus our model should contain variables which are equivalent to the parameters we can observe or manipulate in the actual system. The question often arises as to how accurate this mathematical model must be for use in an optimization procedure. Often little accuracy is required. Electrical engineers often use what is termed the "black box" approach in studying a system. They can, in other words, begin the optimization procedure knowing only what the inputs and outputs of a system are. The internal workings of the system itself are unknown.

It is important to realize that the process of simulation is an iterative one. Thus we may start with a crude model, determine in what way it is unsatisfactory, refine the model, and begin the process again. In modeling a human figure, for example, we might initially assume a stick figure representation with all joints represented as simple hinges. The results we obtained working with this model would soon indicate that some joints, the hip joint for example, must allow rotation as well as flexion. We would thus refine our model.

Having described our system mathematically, we need a precise description of performance measures. The specification of a performance index for a physical system is often the most difficult part of the problem. In a complete analysis of the high jump, for example, we might determine that one method gives a stronger spring while another keeps the jumper's center of gravity closer to the bar as the jumper clears it. It would be useful to be able to assign a weighting function to these two conditions (i.e., spring strength and center of gravity) so that some combination of the techniques would produce an optimum jump.

As the fourth step, we must, of course, solve the mathematical model and interpret the results in terms of our physical system.

Fortunately, the process need not be as complex as it appears. Using modern computer graphics equipment, which can give us a picture of what is happening, we may make use of our own experience to guide the optimization of the model. Once a mathematic model of human movement is programmed for the computer in such a way as to allow us to control its movements, we may watch the model man attempting a jump. After seeing the result, we can say to the machine: "Try again, modifying a particular parameter."

Some events require even less sophisticated optimization techniques. It is speculated that the change from bamboo to fiberglass poles added several feet to the height of the pole vault record. It would appear likely that for a pole vaulter with a given weight, muscle strength, and style, an optimum pole would exist. Using a computer simulation, we could keep all parameters constant except the coefficient of stiffness of the pole, varying this until the jump was optimal. Once we determined the pole qualities, all that would be necessary would be to talk someone in the engineering department into building one to our specifications. In this last example, the optimization problem is quite simple. If we have a computer program which models a pole vaulter, we merely run the program many times, each time using a different pole, to determine a best pole. It also seems evident that in this case, a detailed model of the pole vaulting activity would not be required. We would be concerned with the speed and forces involved when the pole is put in the box and the take-off occurs. To approximate the pole's action, therefore, we are interested only in simple applications of the laws of motion; not being concerned with all the nuances of style during the vault. In addition to the possible value this simulation might have in winning meets, it demonstrates that a relatively crude approximation to the real world is often sufficient for useful modeling.

Having, we hope, demonstrated the potential usefulness of simulation techniques, we might look at a research project undertaken at Purdue University. This study of human movement focused on evaluating the developmental patterns of preschool children. The first step in the simulation was to describe solid body segments and a set of pivot points mathematically and to store this information in the form of a computer program. Data derived from measuring selected frames in movies of physical activity was used to specify the joint positions as a function of time. The joint position data was read into the computer and used by the program to generate the rotations and displacements needed to move the body. Finally, the movements were displayed graphically by the computer.

While there was no attempt to optimize performance in this study, it is easy to see how we might use the same technique in an optimization study. Assume that we have already written the type computer program described and analyzed a motion picture of a star athlete to get the data required. We are sitting in front of a large TV-like screen, watching the computer simulate this athlete's performance. At some point we get the idea that if the athlete raised his left leg sooner, his performance would improve and so instruct the computer to "Try raising the left leg sooner." The computer in a matter of seconds, makes thousands of attempts to improve performance by raising the left leg at different times, say, in this case, from .001 second to 5 seconds sooner. It then shows us the best result it has achieved and awaits our next direction. This is not science fiction—the equipment and techniques are available today.

We should, I feel, take the time to look at the types of computer equipment available for this kind of simulation study. Most of us are familiar with the digital computers used for statistical analysis. These are machines which operate on numbers, performing several million operations of addition, subtraction, multiplication or division each second. A type of computer which is less familiar to those outside engineering is the analog computer, which operates on variables that are continuously varying with time. Thus, while the digital computer is best suited to handle the large amounts of arithmetic required in statistical analysis, the analog computer is designed to perform operations of calculus on continuously varying quantities.

Since muscle movement, and therefore athletic events, are continuous processes most easily expressed using the notation of calculus, we feel that an analog computer would be more suitable for their simulation. The ideal situation is the use of a hybrid system, or mixture of computers. With this system we might:

A) Simulate the muscle movements on an analog computer.
B) Use the digital computer to control the analog and to analyze the results.
C) Obtain the type of graphical information described earlier.

Although this question of hardware is not central to the issue of the role of simulation in athletic performance, it is definitely worth keeping in mind. Just as in any other project, the resources available will play a large part in shaping the form of the research. One likely reason why this type of investigation has not been attempted on a large scale before, in fact, is that the type of equipment required is relatively new. The machines are now available, however, and should be used.

The purpose of this talk has been to discuss a "new frontier" in physical education research. The remaining question is: How to proceed from here? The first step is obviously conversations with people involved in simulation activity. Find an individual in Engineering, in Control Science, or in Computer Science who is interested in the project and discuss it with them. Any project must certainly start as a joint endeavor, combining the mathematical and computer skills of the engineering discipline with the knowledge of kinesiology and of the athletic events in physical education. Purdue, for example, has a joint project between the Women's Physical Education Department and the Department of Mechanical Engineering. At the University of Minnesota, the Men's Physical Education Department and the Hybrid Computer Laboratory are working together to begin this type of research.

Once your direction is established, through dialogue with engineers and the beginning of projects, the Physical Education Department should encourage the development of the mathematical and computer skills required in its own graduate students, possibly by making computer simulation of athletic performance a standard area of specialization within the department. Although this is a long range objective, you can find people in the physical sciences who would be interested in helping you initiate a program of the type we have discussed.

It is evident that we, as computer specialists, are not aware of the many areas of physical education which would benefit from simulation. We have, I hope, sketched the potentials of this type of research. The examples of the high jump and pole vault were mentioned only because they involve questions which we became aware of in the popular press. It must be emphasized that in the simulation of athletic performance, as in all simulation studies, what is accomplished depends almost entirely on the inventiveness, ingenuity and perseverance of those in the field.

Reaction to "Computer Simulation in Athletic Performance"

William W. Heusner
Michigan State University

It is a pleasure to have the opportunity of reacting to the provocative paper of Stephen Kahne and John Salasin. Computer simulation is a timely topic. It is especially pertinent at this conference, since it is a relatively new and powerful method of research which has been overlooked, to a large extent, by investigators in the profession of physical education.

I have decided to limit my comments to several small but important matters, all of which are related to the applications of computer simulation in this field.

The Need for Computer Simulation

We are dealing with a complex phenomenon—the *human body* engaging in *physical activity* under various physical and social *environmental* conditions. The problem becomes even more complicated when we realize that the word *education* is a part of our name. We must teach individuals to perform various motor skills in many different settings. When one examines the myriad cognitive parameters of learning, the innumerable physiologic parameters of the human organism, the countless mechanical parameters of movement and the infinitely great number of physical and social parameters of the environment, one realizes the enormity of the task we have undertaken as a profession.

The teacher and coach ask a difficult question for the researcher to answer, "How shall I proceed in order to best accomplish my objectives?" In their simplest form, these objectives may range from teaching a first grade child how to throw a ball to coaching a pole vaulter so that he can break a World record. In less simple form, they may include improving reading comprehension through perceptual motor training and ameliorating racial problems in team situations involving game strategies.

The practitioner cannot allow himself the luxury of the occupational disease of the researcher—the *all other things being equal* syndrome. It is quite easy to isolate one or several factors in the laboratory. Furthermore, the researcher being quite smart reasons, "I am too dumb to study the effects of more than a few experimental factors simultaneously." In doing so, he rules out most of the interaction effects he needs to know in order to answer the practical questions of the teacher and coach. In fact, the very nature of laboratory research, as it is now conducted, widens the much discussed and lamentable gap between research and practice. The practitioner needs integrated information and he needs it now. The researcher is supplying him with a multiplicity of isolated facts. However, in the computer, especially the hybrid computer system, we have an instrument which may make the researcher smart enough to answer some of these practical questions. The possibilities for the manipulation of many variables one at a time and in various combinations are limited only by the ingenuity of the investigator.

If we have established the need for computers, we should look next at the advantages of simulation. Economy of time and money already has been mentioned. The fact that comparable data can be obtained without the confounding effects of unalterable individual differences and habits also has been discussed. But, there is at least one other reason for simulation. Some valuable studies simply cannot be conducted on human subjects. If we are interested in determining the effects of a specific training program on the concentration of an enzyme in the myocardium, we will have difficulty obtaining human subjects. Most coaches, and even some parents, object strongly to having their children's hearts homogenized for the sake of science.

Some of the people in this profession have been critical of animal research saying that the results may not be applicable to humans. The fact is, the laboratory animal is a model—a simulation device. The white rat may not be a good model of the human, but it can be used in situations where humans cannot. Undoubtedly, in the future we will have better analog computer models. When that time comes, our studies will be costly, broader in scope, and more representative of the population to which we wish to draw conclusions.

Available Computer Simulation Models

At this point, we might wonder whether or not any useful computer simulation models already have been developed. The answer is an emphatic *yes!* It is not within the scope of this brief reaction to inventory all such models. However, I should mention that computer simulation models of social and cognitive processes are frequently presented at the annual meetings of the American Educational Research Association.

Physiologic models are presented in legion at the Annual Conferences on Engineering in Medicine and Biology. At one conference recently, more than fifty such papers were presented ranging from "A Mathematical Model for the Neck Receptors—Ocular Reflex" through "Computer Simulation of the Blood Pressure Control of Heart Period" to "A Simulation of Respiratory Mechanical Dynamics." Many of the models presented were pertinent to research in physical education.

NASA scientists have done a considerable amount of work simulating the mechanical parameters of various human movements. Computer simulation models of sports skills now are being developed in scattered physical education laboratories around the country. In addition to those locations mentioned earlier, I call your attention to Dale Hansen's work at Pennsylvania State University which certainly falls in this category. There is ample background material for those of us who wish to enter this line of investigation. Furthermore, most of us in universities now have well-equipped and competently staffed computer centers at our disposal.

Types of Models

Let us turn now to a discussion of specific model types. I already have mentioned the laboratory animal as a model. In this context, the animal is a physical model and lacks certain desirable attributes. Other physical models have been used in the past by physical educators. One which immediately comes to my mind is the wooden head which was used by Henry Montoye and Wayne Van Huss at Michigan State University in their study of the protection offered by various football helmets. An accelerometer was mounted in the head. Helmets of several materials were placed on the head and then struck with a weighted pendulum. The concussive force of each blow was measured in terms of the accelerometer output. Although the model was crude and cantankerous, it did provide valuable information and was economical of human brain tissue. Undoubtedly, a number of serious injuries have been prevented as a result of that study.

Today, however, we are discussing much more sophisticated models—simulation models for hybrid computer systems. These are mathematical models. They do not exist in a physical sense. We observe the effect(s) of one more hypothetical experimental factors by changing corresponding mathematical terms (analogs) in a model equation (analog computer), solving the equation after each alteration using a digital computer, and observing the resulting values in one of several output media. Note that a statistical analysis of the data is not needed—at least not the type of statistical analysis which has become so dear to us in recent years. If a mathematical model of the height of a high jump is *valid*, any combination of variables which yields a solution of seven feet would, in real life, produce a jump of seven feet. Of course, the critical concept here is the validity of the model.

Model Validity

We should pursue this concept of validity a bit further. Functionally, there are two kinds of mathematical models. The first of these is the model of a process which follows *known* laws. A model of any human movement is of this first type. Human movement conforms to the principles of classical Gallei-Newtonian physics. The movement, and therefore the model, may be either simple or complex, but the principles are known and thus the model can be developed to any desired degree of accuracy. Validity is no real problem since it is easily testable. That is, the presence or absence of simulation-model validity is soon apparent.

Perhaps an example will help. Some time ago I undertook the task of developing a mathematical model to determine the optimal angle of take-off in a racing dive in swimming. My first model was simple, in that it contained only three parameters. However, when I tried to apply the model I found it was invalid. Over a period of time, I refined the model until finally it contained not three but twelve parameters. The validity of the model paralleled its complexity. Using the final model, I obtained a correlation between predicted and actual performances of $r = .975 \pm .013$. Incidentally, that study was conducted before modern computer hardware was available. In attempting to determine the optimal angle of take-off for each subject, I followed the standard calculus approach. I took the first derivative of my equation and set the derivative equal to zero. When I inserted the first subject's values and tried to solve for the angle, however, I found the hand calculation to be horrendous! I had to give up and use the approximate technique of calculating successive solutions of the model equation itself. At that, each solution took nearly an hour; and figuring six to eight solutions per subject, the total job was quite tedious. Recently, as an exercise in mental gymnastics, I programmed the direct solution of the derivative and ran it on our Control Data 3600 computer. Each solution took less than one second.

The past summer, one of my students developed a valid mathematical model for locating the center of gravity of a tramoplinist while doing a fliffus. His input was elapsed time and the locations of the various body segments. Neither the movement nor the model is particularly complex. However, the information which can be gained from that model is nearly inexhaustible.

Earlier I mentioned that there are two kinds of mathematical models. The second of these is the model of a process which follows *unknown* laws. Models of most cognitive and social, and many physiologic, phenomena are of this second type. Undoubtedly, there are operant laws for these processes, but they are not well known at present. Therefore, mathematical models must be developed on an empirical basis. Model validity here is an important problem. It is on this point, and only this point, that I must differ with Drs. Kahne and Salasin. They have stated that, "Often little accuracy is required. Electrical engineers often use what is termed the 'black box' approach in studying a system." I realize that they are referring only to the initial model, that simulation is a reiterative process, and that I have taken a statement out of context. However, in my limited experience with modeling physiologic processes, I have come to the conclusion that the mathematical parameters of a model must reflect the biological parameters as closely and as early as possible. I feel that extreme care must be taken in this regard to avoid at best a waste of time and at worst misleading information. This seems to be true especially in studies involving optimization where predictions beyond the range of the immediate data are to be made. Note that I have no quarrel with their statement as it may apply to cognitive and social phenomena, as I feel many behavioral scientists are working in a black box much of the time anyway.

Let me give you an example in the area of physiology of exercise. Recently, I was involved in a study which required the permanent implantation of stimulating electrodes around the tibial nerves of animals. Over a period of several months or years, implantations often are encapsulated by the host organism. In this case, encapsulation resulted in increased electrical resistance. We were interested in developing a model which related electrode resistance to several variables in the animal and to time of implantation. We tried several types of curves and settled on what was basically a *logarithmic* equation. There was biological justification for such a model, and all went well for over two years. Our model validity appeared to be quite good. However, early in the third year of the study our animal supplier slipped three females into an order of 150 male weanling rats. We decided to implant these animals anyway just to see if our implantation technique was applicable to females. The technique was, but the mathematical model was not. We had to reconstruct our model from scratch. We finally found what was basically a hyperbolic equation served as the best model for both males and females—separately as well as together. Our mistake earlier was in not including one specific hormonal measure as a parameter of our model.

The Future of Computer Simulation in Physical Education

In conclusion, I would like to comment briefly on the recommendation of Drs. Kahne and Salasin that computer simulation of athletic performance become a standard area of graduate specialization in physical education. I predict that recommendation will be adopted in the not too distant future. Obviously, a level of mathematical competence, not general today, will be needed. Therefore, I also predict a solid grounding in mathematics will become as common then as training in physiology and statistics are now. Two or more years of college-level mathematics may be the rule rather than the exception. Although such a prediction, if it is to come true, will have important, perhaps frightening, implications for our present undergraduate major programs, I for one eagerly await that day.

Reaction to "Computer Simulation in Athletic Performance"

Charles R. Kovacic
University of California - Davis

My colleagues in mathematics have always said that the science of mathematics could solve all of the world's problems no matter what they might be. It seems to me, however, that as time progresses in our world and the influence of computers on modern technological developments becomes greater, our human problems become greater as well. Have you ever tried to get an answer from a computer that billed you improperly, i.e., income tax and social security number?

To get on with it, my general reaction to what Kahne and Salasin describe in their paper is that "basically" they are correct in implying that computer simulation of athletic performance is possible. Physical Education and Athletics does need and would benefit from the use of simulation techniques. Additionally, they are correct in stating that the technology per se is available to do the job. They are not correct, however, when they make statements like, "it is quicker and far cheaper," or, "it is easier," or, "often little accuracy is required," or, "the process need not be as complex as it appears," or that "the machines (computers) . . . are available and ready for use."

Before I elucidate on the points I just mentioned, let me preface my remarks by saying that the so-called "natural athlete" has done what the authors suggest without even knowing it. In other words, he has a built-in computer. Further, the NASA moon program is only slightly relevant to athletics per se. I say this because in some of the research I have been doing on electrocardiography during dynamic effort, I went to the NASA people for help in designing a telemetering system that would be usable. They could not help me despite the fact that they were able to monitor EKG's, EEG's, etc., when the astronauts were 200,000 miles away in outer space. They had no answers for me on how to implement a man who was getting tackled or blocked in a football game, despite all of the time and money they had spent on researching rocket travel in outer space.

To get back to the points I mentioned earlier, let me say that my primary concern with the presentation is that the impression is left the reader that the mathematical models are easy to construct and/or may already be available, or that "little accuracy is required." I'm not sure that they are available, but I am sure that the usefulness of the model depends upon the accuracy of the model. The models of the human body must be complex in order to do the kind of simulation that the authors discuss, and further it will take a considerable amount of work to develop them. Also, new information must be generated that is not currently available, e.g., the magnitude of some of the forces involved in the activity. By way of illustration, we do not know, at present, the kinds of forces energywise that are imparted to the brain when the head is impacted in a football game. We tried to build a model that was realistic, but had great difficulty because too much confusion exists insofar as levels of energy input into the brain are not really known. Also, optimization is difficult because of the makeup of the human body systems.

Further, the authors' reference to the "hardware" that was a problem in the past is and has been resolved by presently available equipment. It is still an obstacle in the design of simulation models, however, because the marriage of analog-digital computers is still a new area of research which needs further sophistication. Besides, although hybrid computers are available in several locations, they are not readily available to many people in athletics, and the simulations are rather expensive to set up or run.

There is no doubt that the development of models will entail an interdisciplinary interaction that is not common. It will, also, require great effort to unify and get all of those involved working on the same wave-length. Given time and money it is not an insurmountable problem. Needless to say, it would be a most useful tool for understanding the athlete and his action during performance; more of this type of activity should be carried on at our colleges and universities around the country.

In closing, I would like to leave you with one thought. Computers have created a new kind of mathematics and are the basic components of automatic factories, automatic airplanes, missiles and rockets. Computers are taking over the most tedious and elementary computations which, until yesterday, were laboriously carried out by engineers. With these few examples in mind it is easy to predict that they will pervade most fields of human activity and free mankind from the drudgery of endlessly repeated operations.

Like all other automatic gadgets, computers unfortunately also have a definite numbing influence on the human mind. Just as the car has made walking most unpopular among some members of the new generation, computers have made some research people lazy. Such people often prefer to give the calculations to the computer at once rather than to spend a little time and effort in attempting to discover whether human ingenuity can so simplify them as to make a computer unnecessary. The unreasoning faith in computers is best exemplified by the statement of a high school principal to the worried father of a boy who was not doing too well in mathematics. "Don't worry," he said, "by the time your son is out of school, all mathematics will be done by computers." It is sobering to remember that computers must still be given orders by men and that to this day 20 per cent of the computing time is spent in "debugging" the computer—in simply discovering the unavoidable mistakes that the computer makes because of incomplete or unclear orders from the men who run it.

Interrelationships Among Mental, Motor, Personality, and Social Variables in Low Achieving High School Students With High Intelligence[*]

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Introduction

In recent years the relationships among intellectual, motor, and personality variables have been investigated under the assumption that they jointly comprise an integrated syndrome influencing the development of the human organism. Ismail, Kephart and Cowell,[1] Ismail and Gruber,[2] and Yoder[3] utilizing both univariate and multivariate data processing techniques have produced information which tends to consistently support the validity of the stated assumption. Briefly, the above investigators have demonstrated that items measuring coordination of the arms and legs correlate to a higher degree with intellectual performance than do items which measure growth, strength, speed or power. These same investigators through factor analysis identified an *Intellectual Development* factor. Coordination items consistently had higher factor loadings on this factor than did speed, strength, power and growth items. Ismail[4] has shown that an experimental physical education program can produce desirable improvements in scholastic achievement.

A study by Ismail, Kane, and Kirkendall[5] conducted on 10-12 year old British school children provided important cross-validation information as to the relationships between mental and motor performance. An added feature of that study was the inclusion of the personality domain. In general, they found that neuroticism and extroversion were loading on four of the eight factors extracted, indicating some relationship with the motor and intellectual domains. However, the investigators were cautious about making further comments since the extent and direction of association varied with the factor and sex of the children.

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[1] A. H. Ismail, W. Kephart, and C. C. Cowell, *Utilization of Motor Aptitude Test Batteries in Predicting Academic Archievement*, (Technical Report No. 1, Purdue Research Foundation, P.E. 879-64-838, August, 1963).

[2] A. H. Ismail and J. J. Gruber, *Integrated Development: Motor Aptitude and Intellectual Performance* (Columbus, Ohio: Charles E. Merrill Books, 1967).

[3] Jay H. Yoder, "The Relationship Between Intellectual and Non-Intellectual Performance" (Ph.D. Dissertation, Purdue University, June 1968).

[4] A. H. Ismail, "The Effect of a Well Organized Physical Education Programme on Intellectual Performance," *Research in Physical Education*, (Vol. 1: June 1967), pp. 31-38.

[5] A. H. Ismail, J. Kane, and D. R. Kirkendall, "Relationships Among Intellectual and Non-Intellectual Variables," *Research Quarterly*, (Vol. 40, No. 1, March 1969), pp. 83-92.

Kirkendall[6] further expanded this work by utilizing the *Children's Personality Questionnaire* (CPQ) in an effort to further clarify the nature of relationships between personality, motor and intellectual items. He found that the motor, personality and intellectual items were for the most part significantly inter-related. In the motor domain, the items measuring coordination of the arms had the highest relationships with intellectual achievement. Of greater significance is the fact that a weighted linear vector of coordination items significantly discriminated among high, medium, and low academic achievers. A personality vector similarly discriminated among these three discrete intellectual achievement groups.

All of the above studies were similar on two counts. They were conducted on school children ages 10-13 years, in various cities, and they all arrived at basically the same results.

A number of researchers have investigated the personalities of overachievers and underachievers. Pierce,[7] Keimowitz and Ansbacher,[8] Gill and Spilka,[9] and Davids[10] all utilized the *California Personality Inventory* while Werner[11] used the *Children's Personality Questionnaire* when comparing the personalities of these discrete groups. In general, they all found the overachievers to exhibit more desirable scores on such source traits as responsibility, tolerance, resourcefulness, independence, social maturity, conscientiousness, intelligence, venturesome and emotional stability.

In view of these previous findings, it was of interest to see if the concept of integrated development extends into a special high school population.

Purpose of Study

The general purposes of this study were: (1) to investigate the interrelationships among mental, motor, personality and social domains in a group of low achieving high school pupils with high intelligence and (2) to identify the factors present in a wide variety of items thought to measure those domains.

Procedures

Sampling Procedures. The students participating in this study were the entire population of 96 students, ages 14 through 17, at Lincoln School, Simpsonville, Kentucky. Due to reasons of health, orthopedic, and discipline problems only 91 subects (Girls—44, Boys—47, Negro—41, White—50) in grades 9 through 11 completed the study. Lincoln School provides a residential setting for culturally deprived pupils achieving below capacity at time of admission.

Measuring Instruments and Procedures. Data were collected on 34 variables. Information concerning the validity of these measures and directions for their test administration can be found in the references cited. In addition to the usual growth measures of age, height, and weight,[12] the variables included were:

a) five fitness items—50 yd. dash, 1000 yd. run, standing broad jump, grip strength, and sit-ups;[13, 14]

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[6] D. R. Kirkendall, "The Relationship Among the Motor, Intellectual, and Personality Domains of Development in Pre-Adolescent Children" (Ph.D. Dissertation, Purdue University, August 1968).

[7] J. V. Pierce, "Personality and Achievement Among Able High School Boys," *Journal of Individual Psychology*, (17, 102-107, 1961).

[8] R. I. Keimowitz and H. L. Ansbacher, "Personality and Achievement in Mathematics," *Journal of Individual Psychology*, (16:84-87, 1960).

[9] Lois J. Gill and Bernard Spilka, "Some Nonintellectual Correlates of Academic Achievement Among Mexican-American Secondary School Students," *Journal of Educational Psychology*, (53:144-149, 1962).

[10] Anthony Davids, "Psychological Characteristics of High School Male and Female Potential Scientists in Comparison with Academic Underachievers," *Psychology in the Schools*, (3 [1]: 79-87, 1966).

[11] Emmy E. Werner, "CPQ Personality Factors of Talented and Underachieving Boys and Girls in Elementary School," *Journal of Clinical Psychology*, (22:461-464, 1966).

b) six items purported to measure coordination of the arms and legs;[15]

c) the fourteen personality factors comprising the *High School Personality Questionnaire;*[16]

d) five intellectual achievement measures—*Kuhlman-Anderson I.Q.;*[17] Verbal, Quantitative, and Total Derived *Stanford Academic Achievement Scores;*[18] and a classroom achievement rating; and

e) social acceptance as measured by the *Cowell Personal Distance Ballot.*[19]

The *IPAT-HSPQ* personality inventory, the *Kuhlman-Anderson I.Q.*, the *Stanford Academic Achievement* tests and the *Cowell Personal Distance Ballot* were all administered in a standardized testing environment by the Lincoln School psychologist. The classroom academic achievement rating was done by the teachers on a paired comparison basis.

Growth and fitness item data were collected by the Lincoln School physical education teachers. The coordination items were administered in a private session to each child by the directors of this study. Seven testing sessions spread over a two week time span were required to collect all data. This two week period was the same year-end period devoted to routine achievement testing at Lincoln School.

Data Processing. In an effort to eliminate any possible sex or maturation contamination of certain data, the fitness test scores were converted to T-scores based on sex and grade and the *Stanford Academic Achievement* scores were converted to T-scores by grade. The *Kuhlman-Anderson I.Q.* scores are inherently adjusted for age. All other data were utilized in their raw score form.

Pearson-Product-Moment Correlation coefficients for all possible pairs of the 34 variables were calculated for the total group. The correlation matrix with multiple correlations squared on the diagonal was then submitted to factor analysis in order to identify the basic components found in the 34 items selected from the motor, personality, social, and intellectual domains. The principal axis form of solution was employed. The cut-off point for the number of factors to be rotated was subjectively decided upon by considering the roots which had values more than unity and by determining where a large drop took place in the eigen values. The seven factors were then orthogonally rotated utilizing the Varimax program which is in accordance with the Kaiser Criterion.[20] Factor loadings greater than .30 were considered in the process of naming factors.

Results

Observing the correlation coefficients in Table 1, it can be seen that some of the highest correlations are among variables in the intellectual domain. The *Verbal Stanford Achievement* and *Quantitative Stanford Achievement* correlated .77 and .67 respectively with the *Total Stanford Academic Achievement* score. The highest correlation between the paired comparison achievement rating and

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[12] A. H. Ismail and J. J. Gruber, *Integrated Development: Motor Aptitude and Intellectual Performance* (Columbus, Ohio: Charles E. Merrill Books, 1967).

[13] *Youth Fitness Test Manual*, (American Association for Health, Physical Education, and Recreation, Washington, D.C. 1962).

[14] Ismail and Gruber, op. cit., 1967.

[15] D. R. Kirkendall and J. J. Gruber, "Consistency of Arm and Leg Coordination Measures," *Journal of Motor Behavior*, (In press—1970).

[16] R. B. Cattell, *Handbook for the Jr., Sr. High School Personality Questionnaire*, (Champaign, Illinois: Institute for Personality and Ability Testing, 1969).

[17] *Kuhlman-Anderson Test—Technical Manual; Booklets G and H* (Princeton, New Jersey: Personnel Press, Inc., 1963).

[18] E. F. Gardner, J. C. Merwin, R. Callis, and R. Madden, *Stanford Achievement Test; High School Battery* (New York: Harcourt, Brace and World, Inc., 1965).

[19] Charles C. Cowell, "Validating an Index of Social Adjustment for High School Use," *Research Quarterly*, (Vol. 29, No. 1, March 1958).

[20] H. F. Kaiser, "The Varimax Criterion for Analytic Rotation in Factor Analysis," *Psychometrika*, (23:187-200, September, 1958).

TABLE 1
ITEM INTERCORRELATIONS, MEANS AND STANDARD DEVIATIONS† (N = 91)

ITEMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21*	22	23	24	25	26	27	28	29	30	31	32	33	34	X̄	S.D.
1. Age	.37	.28	.13	.06	-.01	.04	.03	-.03	.18	-.15	.09	-.09	.02	-.05	-.02	.03	-.27	-.13	.00	.09	-.00	.04	.09	-.02	.04	.08	-.06	-.05	-.10	-.04	-.00	.03	.13	-.07	187.40	11.12
2. Height		.71	.41	.08	.11	.21	.30	-.08	-.14	-.13	-.03	-.35	.09	-.28	.03	.11	-.11	.21	.19	-.13	.12	-.25	.10	-.11	.13	-.10	-.21	-.11	-.03	-.03	-.13	.05	-.01	-.27	65.92	3.69
3. Weight			.77	-.49	-.55	-.32	.35	-.28	-.01	-.12	-.10	-.05	.07	-.14	-.15	.03	-.18	-.05	.04	.01	-.08	-.06	.01	.04	.09	.02	-.07	-.12	.15	-.05	-.06	.12	.11	-.06	137.53	12.61
4. 50 Yd.*				.78	-.57	.73	.22	.28	.06	.03	.12	-.06	-.04	.01	.15	.04	.19	.21	.24	-.04	.17	-.07	-.04	-.07	-.22	-.16	.08	.17	-.18	.07	.12	.03	.04	.02	50.14	9.84
5. 1000 Yd.*					.71	.46	.06	.41	-.12	.00	.09	-.17	-.06	-.04	.16	.11	.17	.17	.17	-.09	.13	-.14	-.09	-.02	-.21	-.20	.01	-.08	-.22	-.08	-.01	-.23	-.26	.02	50.09	9.54
6. S.B.J.						.78	.79	.22	.00	.06	.17	-.06	.14	.02	.27	.05	.12	.25	.21	-.05	.16	-.08	-.15	-.10	-.30	-.11	.11	.13	-.30	-.08	-.12	-.15	-.04	.20	49.99	9.81
7. Grip							.68	-.01	.05	.01	.03	-.01	-.13	-.02	.12	.06	-.02	.08	.11	.09	.06	-.06	-.12	.03	-.20	-.09	-.05	-.02	-.15	-.01	-.16	-.03	-.07	.27	50.48	9.61
8. Sit-up								.39	.14	.01	.13	.03	-.10	-.01	-.03	.04	.06	.03	-.09	-.06	.10	.02	-.02	-.04	-.19	.09	-.00	-.01	.02	.06	.16	.03	.01	.06	49.95	9.47
9. HR&L (Hopping)									.66	.05	.64	.35	.18	.27	-.07	-.02	-.02	-.12	-.31	.21	-.07	.17	.00	-.04	.11	.37	.10	.20	-.06	-.07	.01	-.09	.00	.10	26.29	8.63
10. Arms—6 Counts										.41	.15	.08	.26	.22	-.04	.00	.16	.16	.09	.02	.09	-.19	.02	.00	.02	-.02	-.01	.11	.00	-.25	.04	-.10	.04	-.01	23.00	6.41
11. H2R&L (Hopping)											.60	.28	.06	.15	.03	.02	.14	.04	-.11	.06	-.04	.13	-.12	-.05	-.02	.21	.04	.06	-.14	-.24	.05	-.19	-.09	.17	26.34	7.19
12. Hop—12 Counts												.57	.15	.50	-.01	-.07	-.03	-.14	-.14	.06	-.13	.20	.05	.11	-.07	.06	.17	-.01	.10	-.04	.11	-.04	.11	.24	50.70	18.39
13. Arms—8 Counts													.53	.16	.07	.20	-.04	.13	.06	.04	.18	-.11	.01	-.09	.13	.14	-.13	.15	.18	.03	.10	.13	-.07	-.32	33.53	9.56
14. Arm & Leg														.57	-.03	-.08	.05	-.12	-.10	.07	-.15	.16	-.03	.14	-.07	.03	.10	.26	.10	.06	.09	.07	-.00	.25	22.31	8.59
15. A (HSPQ)															.47	.19	-.04	.29	.28	.03	.38	-.02	-.29	-.21	-.36	.02	-.06	.08	-.00	-.08	-.24	-.22	-.20	-.04	11.00	3.14
16. C (HSPQ)																.59	-.25	.28	.25	.24	.57	-.29	-.24	-.51	.01	.21	-.40	.04	-.02	-.18	-.05	-.14	-.29	-.18	8.85	3.41
17. D (HSPQ)																	.44	.20	.19	-.22	-.15	-.04	.05	.25	-.10	-.21	.30	.02	-.21	-.00	.05	-.04	-.05	-.07	9.92	3.44
18. E (HSPQ)																		.59	.61	-.25	.37	-.47	-.09	-.12	-.07	-.23	-.11	.09	-.04	-.14	.04	-.04	-.20	-.16	9.43	3.82
19. F (HSPQ)																			.64	-.25	.38	-.34	-.14	-.07	-.18	-.38	-.06	-.06	-.03	-.18	-.03	-.06	-.19	-.16	10.37	3.58
20. G (HSPQ)																				.53	.25	.09	-.08	-.28	.15	.42	-.22	.03	.07	.00	-.00	-.00	.04	.09	11.48	2.75
21. H (HSPQ)																					.67	-.22	-.28	-.58	-.15	.17	-.25	.00	-.01	-.13	-.01	-.08	-.12	-.20	9.67	3.89
22. I (HSPQ)																						.55	.05	.04	-.19	.26	.08	-.12	-.03	.11	-.12	.05	.26	.36	11.41	4.25
23. J (HSPQ)																							.42	.17	.35	-.05	.10	-.11	.05	.06	.05	.19	.33	-.07	9.74	3.64
24. O (HSPQ)																								.61	-.01	-.19	.41	.07	.09	.03	-.06	-.02	.05	.15	11.00	3.46
25. Q_2 (HSPQ)																									.53	.18	-.24	.08	.01	-.04	.14	.10	.11	-.33	9.59	3.65
26. Q_3 (HSPQ)																										.61	-.21	-.03	-.11	-.19	-.06	-.15	.06	.08	10.47	3.12
27. Q_4 (HSPQ)																											.49	-.07	-.19	-.01	-.16	-.11	.06	.17	9.51	2.95
28. B-total (HSPQ)																												.54	.76	.26	.02	.18	-.02	-.17	7.79	1.22
29. Kuhl I.Q.																													.69	.46	.45	.62	.18	-.10	122.74	8.20
30. Slee-Verb																														.78	.36	.77	.30	-.01	49.82	8.47
31. Slee-Quan																															.74	.67	.34	-.02	50.22	9.15
32. Slee-Tot																																.89	.43	-.07	50.20	6.28
33. Paired																																	.53	.21	50.18	21.61
34. Cowell																																		.85	47.35	7.72

R's on the diagonals

† With 89 degrees of freedom a correlation of .20 is significant at the .05 level.
* Signs reflected.

any other intellectual measure was .43 with the *Total Stanford Academic Achievement* score. This indicates that these measures in part tap different types of achievement. The *Kuhlman-Anderson I.Q.* measure had a low correlation of .26 with the intelligence trait of the *HSPQ*. However, the *Kuhlman-Anderson I.Q.* did correlate .62 with the *Total Stanford Academic Achievement* score. Other relationships within the intellectual domain were low or insignificant.

For the most part the growth items did not correlate with items from the social and intellectual domain. The correlations between growth items and the personality and coordination measures were generally low; the highest being −.35 between hopping 12 counts and height. Weight correlated −.49 and −.55 with the 50 yd. dash and 1000 yd. run respectively. The other correlations between growth and fitness variables were low or non-significant.

The highest correlation among the fitness items was .73 between the 50 yd. dash and the standing broad jump. Other relationships between the fitness variables were generally moderate to low. None of the fitness measures significantly correlated with measures of coordination. A number of the fitness items correlated low but significantly with personality traits. These correlations ranged from .27 to −.30. Low relationships were also found between some fitness measures and I.Q., academic achievement, and social acceptance measures, the highest being −.30 between the standing broad jump and I.Q. The *Cowell Personal Distance* score correlated .27 with grip strength.

The highest correlation found among the coordination measures was .64 between two hopping items. Items measuring coordination of the arms were generally unrelated to leg coordination measures. The only significant correlations between coordination items and intellectual performance measures were .26 between arms and legs together with the intelligence trait of the HSPQ; −.25 between arms-6 counts and *Verbal Stanford Achievement*; and −.24 between hop 2RIL and *Verbal Stanford Achievement*. Three coordination items correlated significantly with the *Cowell Personal Distance* score. They were hop 12 counts .25, arms 8 counts −.32, and arms and legs together .25. A few of the coordination items had low significant relationships with some of the personality trait measures.

The correlations among the 14 personality variables indicated that the various aspects of personality measured were not completely independent as evidenced by the coefficients which ranged from .61 to −.58. The highest negative coefficient was between factors E and I, while the highest positive correlation existed between E and F factors of the *HSPQ*. The majority of the remaining 41 significant correlations within this domain were in the 20's and 30's. Factor A correlated −.24, −.22, −.21 with the *Quantitative and Total Stanford Achievement* scores and the paired comparison scores respectively. It would appear that high academic achievement and a detached, aloof, and sulking personality may not go well together. Factor C (emotional stability vs. instability) also had a negative relationship −.29 with the paired comparison score. Factor I and J correlated .26 and .33 respectively with the paired comparison score. Apparently, individuals who are more insecure, dependent, attention seeking, individualistic, introspective, and obstructive are likely to receive higher ratings of classroom achievement. Perhaps a sympathy factor could be coloring the teachers' rating of achievement. This same sympathy aspect might also account for the relationships of .36 and −.33 between the *Cowell Personal Distance* score and factors I and Q, respectively. A significant correlation of .21 was also found between the *Cowell Personal Distance* score and the paired comparison scores. The highest correlation between factor B (intelligence) and the other intellectual performance measures was .26 with the *Verbal Stanford Achievement* score.

The rotated factor solution of the thirty-four variables is presented in Table 2. The seven factors accounted for 83% of the total possible common variance as estimated by the sum of the R^2's which was 20.49.

TABLE 2
ROTATED FACTOR LOADINGS FOR THE TOTAL GROUP

	I	II	III	IV	V	VI	VII	h^2
1. Age	−.02	−.13	.13	.02	−.04	.14	.36	.18
2. Height	−.03	.33	.11	−.02	−.26	.20	.66	.66
3. Weight	.04	.05	.01	−.70	−.07	.03	.52	.77
4. 50 Yd.*	.09	.16	−.07	.80	.04	−.15	.19	.75
5. 1000 Yd.*	−.16	.17	−.02	.73	−.13	−.08	−.05	.61
6. S.B.J.	−.11	.11	−.07	.66	.11	−.33	.38	.73
7. Grip	−.05	.02	−.04	.02	.04	−.35	.65	.55
8. Sit-up	.07	−.08	.06	.47	.03	.00	−.04	.24
9. HR & L	−.11	−.26	.13	.04	.68	.17	.13	.61
10. Arms-6	−.07	.26	−.05	.03	.35	.04	−.12	.22
11. H2RIL	−.21	−.10	.05	.21	.59	.07	.15	.47
12. Hop-12	.05	−.22	−.13	−.09	.57	−.16	−.10	.43
13. Arms-8	.14	.32	.21	−.15	.41	.12	−.08	.38
14. Arm & Leg	.14	−.09	−.14	−.04	.61	−.16	−.16	.47
15. A (HSPQ)	−.13	.19	.22	.10	−.01	−.50	−.02	.37
16. C (HSPQ)	−.12	.30	.66	−.01	.01	−.16	.01	.56
17. D (HSPQ)	−.08	.22	−.43	.23	.10	−.02	.15	.32
18. E (HSPQ)	−.04	.69	.04	.14	.02	−.18	.06	.54
19. F (HSPQ)	−.06	.66	−.04	.05	−.15	−.32	.07	.57
20. G (HSPQ)	.00	−.27	.53	−.03	.15	.05	.00	.38
21. H (HSPQ)	−.04	.34	.64	.14	−.05	−.30	−.01	.63
22. I (HSPQ)	.03	−.66	−.07	−.02	.07	−.13	−.05	.46
23. J (HSPQ)	.12	−.07	−.23	−.02	−.05	.47	.07	.30
24. O (HSPQ)	.00	−.07	−.70	−.12	.07	.10	−.03	.51
25. Q_2 (HSPQ)	.03	.08	.14	−.18	.05	.68	−.00	.52
26. Q_3 (HSPQ)	−.19	−.40	.51	−.06	.24	.17	−.01	.54
27. Q_4 (HSPQ)	−.13	−.13	−.56	.06	.08	−.10	−.07	.37
28. Intel-B (HSPQ)	.27	.17	.03	.06	.32	−.03	−.07	.21
29. Kuhl-I.Q.	.69	.07	.08	−.25	.06	−.03	−.14	.58
30. Stan-Verb	.78	−.15	−.06	.06	−.13	−.04	−.02	.66
31. Stan-Quant	.67	−.05	.05	.14	.12	.20	−.09	.54
32. Stan-Tot	.94	−.01	−.01	−.05	−.05	.12	.08	.90
33. Paired	.43	−.32	−.11	−.01	−.01	.18	.16	.35
34. Cowell	.03	−.50	−.24	.08	.14	−.39	.15	.51
Amount of Variance	2.95	2.82	2.73	2.66	2.20	1.96	1.67	16.99
Per Cent Contribution	17.4	16.6	16.1	15.7	12.9	11.5	9.8	100%

* Signs reflected

By observing the rotated loadings on the first factor in Table 2, it was decided to name this factor *Intellectual Performance* since all of the considered loadings were found on those items measuring academic achievement and/or intelligence. Motor, personality, and social variables did not load on this factor.

Factor II is obviously a personality factor with *HSPQ* factors E, F, and I carrying the highest loadings while factors C, H, and Q_3 had moderate loadings. According to the *HSPQ* manual,[21] this would indicate that the personality characteristics of assertiveness, aggressiveness, enthusiastic and tough mindedness would go together in this factor. Due to the nature of these descriptions it was decided to name this factor *Social Dominance vs. Social Passiveness.* It is interesting to note the moderate negative loadings on the Paired-Comparison variable and the *Cowell Personal Distance Ballot*. This may indicate that the student who possessed the personality qualities described above may not be well accepted by his peers nor by his teachers.

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[21] Cattell, op. cit., 1969.

The third factor had its highest loadings on seven of the *HSPQ* personality factors, namely C, D, G, H, O, Q_3, and Q_4. The personality adjectives associated with these variables would be emotional stability, deliberate persistence, socially bold, secure, exacting willpower, and relaxed and tranquil. It would appear that these adjectives might describe an individual who is stable and independent. Therefore, it was decided to name this factor *Stability vs. Instability.*

Factor four in Table 2 had its highest loadings associated with four fitness items and weight. Therefore, it seemed reasonable to name this factor *Body Fitness as Related to Weight.* It is interesting to note that the only fitness item not appearing on this factor was the grip strength measure. Since the fitness measures which did load on this factor primarily involve the lower limbs and trunk, it would appear that the strength of the upper extremities, as measured by grip strength, was independent of performance with the lower trunk and limbs.

All of the high loadings on factor V are associated with those items purporting to measure coordination. It then seems reasonable to name this factor *Coordination of the Limbs* since these variables involve either the legs and/or arms. The only other variable loading on this factor was the general intelligence trait of the *HSPQ.*

Factor VI appears to be yet another personality factor with the highest loadings occurring on the A, J, and Q_2 factors of the *HSPQ.* The personality descriptions associated with these variables and their direction would be reserved, detached, circumspect individualism, self-sufficient, and prefers own decisions. This factor seems to indicate a rather clear description of *Extroversion vs. Introversion,* and was named such. It is also worthy of mention that the power motor items, standing broad jump and grip strength were negatively related to this factor, indicating that one who is more introverted may perform more poorly on these motor items. Furthermore, with the negative sign associated with the *Cowell Personal Distance* scale, there is an indication that the personality type labeled introversion may be associated with lack of popularity among peers.

Factor VII appears to clearly be a *Growth and Development* factor since the highest loadings are on age, height, weight, standing broad jump, and grip strength. Each of these variables is either a direct measure of growth or a variable logically affected by growth.

Discussion

Perhaps the most noteworthy observation to be made about the above results is the fact that the motor, intellectual, personality, and social domains were found to be primarily independent of one another. This is contrary to the findings reported in numerous other studies.[22,23,24,25]

One possible explanation for this lack of relationships could be that measures used to assess the domains are invalid for this special kind of population. This seems logical since most of these tests have been developed on urban, white, middle class students. Another reason might be that these relationships truly do not exist in this rather specially defined group. Again, this seems feasible when considering that many of these students were previously known to have adjustment problems of an intellectual, mental, and social nature.

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[22] Ismail and Gruber, op. cit., 1967.

[23] Ismail, Kane and Kirkendall, op. cit., pp. 83-92.

[24] Kirkendall, op. cit., 1968.

[25] Yoder, op. cit., 1968.

The three factors identified in the present study involving motor performance, namely *Body Fitness, Coordination of the Limbs*, and *Growth and Development*, are very similar to factors identified in those studies which used 10-13 year old children.[26, 27, 28, 29, 30] It seems reasonable then, to conclude that these independent factors exist in children of varied ages.

The *Intellectual Performance* factor presently identified is nearly the same factor named in earlier studies.[31, 32, 33, 34, 35] However, it is interesting to note that in the present study, the factor B of the *HSPQ* (intelligence), did not load highly on the *Intellectual Performance* factor. One reason for this may be that the mean score of 7.79 out of a possible 10 would indicate that the items contained in this measure did not possess sufficient difficulty for discrimination within this group.

Three factors dealing with personality were found in this study while only two were found in a comparable study by Kirkendall.[36] One factor, although named differently, seemed to appear in both studies. Kirkendall[37] called it a *Desirable Personal and Social Development* factor and in the present study it was called *Stability vs. Instability*. The other personality factors are found to be different when comparing the two studies. This may be due to the fact that the two studies involved students representing very different populations.

Conclusions

The findings of this study might best be summarized by the following generalizations:

1) The relationships among the domains of motor, social, mental and personality variables were generally low and insignificant;
2) The items within each domain generally correlated well with one another;
3) Seven relatively independent factors were identified from the original pool of 34 items. Three of these factors dealt with personality. Other factors dealt with body fitness, growth and development, coordination, and intellectual performance.
4) Items measuring coordination of the arms are somewhat independent of those items measuring coordination of the legs.

It would be desirable to sub-divide the total group of this study into categories based on sex, race, grade level, and level of academic achievement in order to detect any possible differences between these groups on the mental, motor, personality and social domains involved. It is further recommended that this study be repeated on a more "normal" high school group for comparison purposes.

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[26] Ismail, Kephart, and Cowell, op. cit., August 1968.
[27] Ismail and Gruber, op. cit., 1967.
[28] Ismail, Kane, and Kirkendall, op. cit., pp. 83-92.
[29] Kirkendall, op. cit., 1968.
[30] Yoder, op. cit., 1968.
[31] Ismail, Kephart, and Cowell, op. cit., 1963.
[32] Ismail and Gruber, op. cit., 1967.
[33] Ismail, Kane, and Kirkendall, op. cit., pp. 83-92.
[34] Kirkendall, op. cit., August 1968.
[35] Yoder, op. cit., June 1968.
[36] Kirkendall, op. cit., August 1968.
[37] *Ibid.*

The Effects of Mental Practice and Arousal on a Tracking Task

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Introduction

Teachers of physical education, athletic coaches, and psychologists have traditionally viewed practice in terms of overt or physical performance of the task to be learned. The acquirement of physical skills has generally been associated with long arduous hours of overt practice, an emphasis consistent with the philosophy of learning by doing. Until recently, very little research had been conducted to determine if mental practice might precede, accompany, or follow the physical practice of a skill and possibly aid the motor learning process. Some studies suggest that physical performance might be improved by mental practice, either by watching skilled performers or by just covertly thinking about the task.

The term mental practice is used to mean the mental rehearsal of a skill without any observable movements. Some previous research has suggested that mental practice may aid the learning process. However, there has been enough conflicting research to cast doubt on the effectiveness of the mental practice process as an aid to motor learning.

Mental practice research designs have commonly employed three groups: (1) a physical practice group, (2) a mental practice group, and (3) a control group usually referred to as a non-practice group. The skepticism generated by the critics of mental practice has been directed at the strong possibility that differential arousal levels, which are the direct result of experimenter bias, have been the cause of skill improvement associated with mental practice. In most mental practice experiments the subjects in the physical practice groups have had the decided advantage of being able to view and judge their performance. Few studies chose tracking or pursuit rotor tasks which would make it difficult for the subjects to evaluate their progress during performance. Uncontrolled, this variable has probably led to differential arousal states through the presence or absence of reinforcement, which most likely had a bearing on performance.[1] The mental practice group experiences daily interaction with the experimenter which may introduce an arousal variable due to the Hawthorne effect. The non-practice or control group should always have the same amount of experimental sessions, as the absence of manipulation with the knowledge that a study is being conducted is enough to cause subjects to lose interest and reduce arousal levels to a point that performance would not be optimal.[2]

This study was designed to determine primarily if the mental practice process could be interpreted in favor of a learning hypothesis not attributable to differential arousal (motivational) variables induced by experimenter bias, and secondarily to determine if significant differences in arousal (motivation) were produced between treatment groups. Previous mental practice research designs have typically employed three groups heretofore discussed. No previous design investigating the efficacy of the mental practice process has employed a placebo control group. Therefore, much criticism has been directed at the strong possibility that what researchers have interpreted as significant learning in favor of the covert process of mental practice, is actually due to differential arousal levels produced by experimenter interaction with the mental practice subjects and by a lack of interaction with the strict control subjects.

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[1] Alan Richardson, "Mental Practice," *Research Quarterly*, (38:263-271, May, 1967).

[2] Fred N. Kerlinger, *Foundations of Behavioral Research* (New York: Holt, Rinehart and Winston, Inc., 1964), p. 318.

While the placebo control group is accepted as a means for controlling the Hawthorne effect, this study employs a design which also permits differential prediction through the use of analysis of covariance. To ensure that the mental practice group can be compared to the other three treatment groups in terms of motivational or arousal levels, each of the four treatment groups were equally subdivided into high—middle—low subgroups on arousal (motivation) as indicated by the physiological parameter known as the electromyogram. Since arousal is a relative term and the fact that a condition of no-arousal is doubtful, especially when physical education majors are to be used as subjects, the rationale for this design appears justified. Therefore, should true statistical differences exist after partialling out the effects of arousal, then the process of mental practice must involve something other than motivation. Likewise, should the partialling out of arousal indicate no statistical differences between the four groups, then the hypothesis that mental practice involves something other than motivation will not be supported.

The concept of motivation is usually thought of as a compound concept which incorporates both an arousal aspect of behavior and also the direction taken by the behavior. Most psychologists agree that these two aspects may vary independently, and that the intensity of arousal component is a great service in determining a motivational state. Physiological measures which can serve as direct measures of arousal, can in fact give a direct measure of the intensity of motivation; any other measure would not be as direct.[3]

For the purpose of this study three assumptions were made:

1. All learning occurred under some degree of arousal and probably never in the absence of arousal.[4]
2. The arousal continuum, by means of a physiological measure such as muscle tension gradients (EMG), was a direct measure of the intensity component of motivation.
3. The intensity or arousal aspect and the behavioral aspect can vary independently of each other in terms of the motivational construct.[5]

Procedures

One hundred sixty male and female physical education majors were randomly selected and assigned to one of the four treatment groups, and likewise treatments were randomly assigned to the groups. The four groups were (1) mental practice group; (2) physical practice group; (3) placebo control group; and (4) strict control group.

In an attempt to select a criterion task unfamiliar to the subjects, a relatively simple device common in psychological research called the polar pursuit tracker was adopted. The polar pursuit tracker provides infinite target variability which allows the experimenter to construct a design suitable to his own needs. This advantage over other typical rotor tasks is highly desirable as it should provide both a mental and physical challenge to anyone, including the subjects who are mentally practicing for periods of fourteen to twenty consecutive days. The polar pursuit tracker (Figure 1) is equipped with a removable glass plate which lies over a moving light target. By attaching black contact paper to the glass, a design can be constructed to provide any degree of difficulty.

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[3] Elizabeth Duffy, "The Psychological Significance of the Concept of 'Arousal' or 'Activation,'" *Psychological Review*, (64:265-275, 1957).

[4] P. T. Young, *Motivation and Emotion* (New York: John Wiley and Sons, Inc., 1961), p. 418.

[5] Duffy, op. cit., 1957.

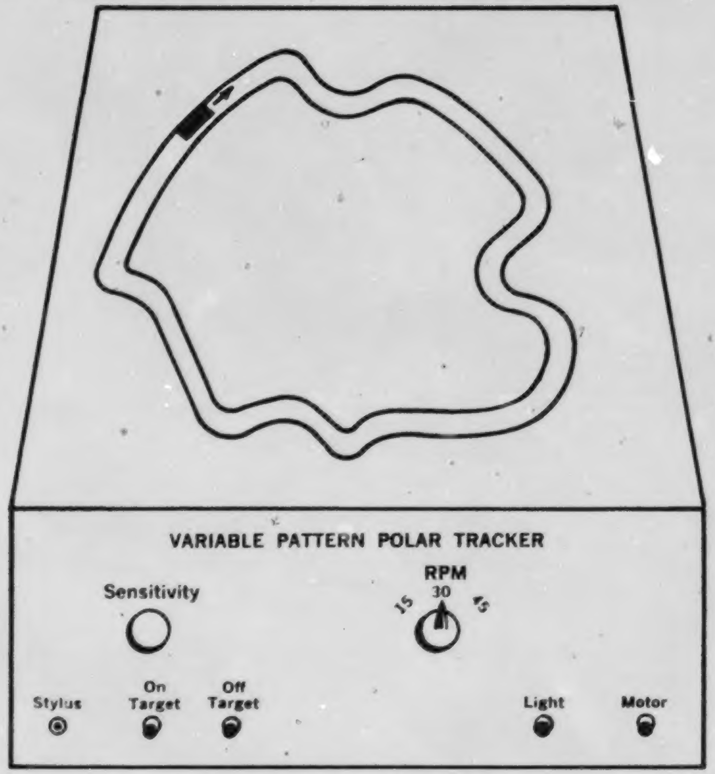

Figure 1. Polar Pursuit Tracker as Established

The polar pursuit tracking device is equipped with a hand stylus which has a photoelectric cell in the tip. While the light target moves through the constructed task at thirty revolutions per minute, the subject attempts to hold the light-sensitive stylus directly over the moving light target. When this is achieved, an electric clock that integrates time-on-target to the nearest hundredth of a second, is activated.

As prior physical experience probably distorts the effects of mental practice, the design used was a randomized posttest-only, two-way analysis of variance.[8] Three levels of arousal (high, middle, low) were compared with four treatment groups (physical practice, mental practice, placebo control, and strict control).

Pilot work indicated that the mental practice subjects had difficulty maintaining a mental image of this criterion task by the third week, therefore this researcher arbitrarily adopted the sixteen consecutive-day period. The performance on the tracking task entailed three consecutive three-minute trials separated by one-minute rest periods, or a total eleven-minute sitting. The one-minute rest periods were incorporated as there is considerable evidence in the work of experimental psychologists of the existence of reactive inhibition, a sort of neural fatigue that makes it more difficult to pay attention to the task and perform at peak efficiency.[7]

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[8] Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally and Co., 1963), p. 25.

The physical practice group was the only group to overtly practice the criterion task daily for sixteen consecutive days. The mental practice group covertly rehearsed the task and the placebo control group was actively involved in the unrelated task (isometric exercises) for the same time-period daily. The strict control group did not participate until the posttest on the criterion task.

A four-channel Grass Model 7 Polygraph was used to obtain a recording of muscle tension changes (EMG). Any physiological change (EMG) was recorded from the individual's baseline or resting physiological state. The measurement was taken on all subjects in the four treatment groups immediately prior to performance of the criterion task.

The baseline index for each subject was computed by averaging the pen deflections (in microvolts) from the zero line of the integrator, every five seconds for the last two continuous minutes of the fifteen-minute recording period, that is, from the beginning of the thirteenth minute to the end of the fifteenth minute.

The Wide Band AC Pre-Amplifier and Integrator was used to record muscle tension changes (EMG in microvolts) from the frontalis muscle using two electrodes placed superior to the medial corners of the eyes at the midline of the forehead. The increases and decreases in muscle tension gradients were recorded as deflections above and below the baseline electromyogram.

The arousal index for each subgroup was a classificatory index, not a dependent variable. At the end of the fifteen minute EMG recording session for baseline determination, a taped recording immediately began explaining to the subject what he was to do regarding the criterion task. Immediately at the conclusion of the tape (seventy seconds in length), on the command to go, timing for the criterion task performance began: 3-minute trial; 1-minute rest; 3-minute trial; 1-minute rest; 3-minute trial; a total sitting of eleven minutes. Any physiological changes (deflections above or below baseline) between the time the taped recording began until the command to go (length of tape, seventy seconds) were averaged for arousal computation.

$S_1 = A = \overline{X} - \text{Baseline}$

$\overline{X} = \text{Mean score in microvolts}$
(length of tape)

The index of each subgroup equals the mean of the arousal scores for all ten subjects.

From the one hundred sixty subjects used in the study, forty subjects were randomly assigned to each of the four treatment groups. In order to complete an experimental period of sixteen days with each subject being tested on the criterion task on either the seventeenth or eighteenth day, a staggered schedule starting sixteen different subjects or four subjects from each of the four treatment groups on alternate days, was employed. A total of thirty-six days was needed for the one hundred sixty subjects, divided into ten sets of sixteen each, to complete the experiment.

On each day of the sixteen-day experimental period the mental practice group ($N = 40$) practiced the criterion task covertly (no overt movement) for an eleven-minute sitting. At the beginning of the first practice the task was demonstrated overtly and at the beginning of each eleven-minute sitting the following instructions were distributed to the subjects.

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[7] H. J. Eysenck, "The Measurement of Motivation," *Scientific American* (208:130-140, May, 1963).

Instructions:

Hold the stylus (palm down) between your index finger and thumb, keeping the tip of the stylus just above the glass but over the moving beam of light as it moves through the pattern.

Beginning at the top of the design, imagine you are scribing an *M* pattern first, then moving clockwise you will scribe a *U*; at the bottom, imagine you are scribing a side-way *Z*; followed by what looks like the letter *L*, *before reaching the top again.*

The physical practice group (N = 40) practiced the criterion task overtly for eleven minutes each day for sixteen days. Throughout the sixteen-day period, the placebo control group (N = 40) was made to feel involved by daily performance of isometric exercises. The strict control group (N = 40) did not participate during the sixteen-day experimental period, but at the conclusion of this period they reported individually as did all other subjects, and the physiological recording (EMG) was taken for baseline and arousal index. After fifteen minutes of continuous EMG recording, a taped recording instructed the subject on the procedure to follow and the subject was asked to perform the criterion task, at which time the time-on-target for each three-minute period was collected. The total cumulative score in seconds, recorded separately for each three-minute session with a possible total of 540 seconds, was indicated by means of an electronic clock which integrates time-on-target. Each subject's total performance score and arousal were computed in each of the four treatments. The forty arousal index scores were then arranged from highest to lowest in each of the four treatment groups. The highest ten arousal index scores were classified as high arousal; the next five scores were eliminated from the study; the next ten arousal index scores were classified middle arousal; the next five scores were eliminated; and the lowest ten arousal index scores were classified low arousal, leaving a total of thirty subjects per treatment group or ten subjects per subgroup, (HA-MA-LA). The mean arousal indices were then computed for each of the four treatments on three levels of arousal. Mean performance scores were also computed for the subgroups. The statistical comparison of the mean scores provided the basis for testing the null hypothesis.

Results

The results of the one-way analysis on arousal yielded a nonsignificant F score (F = 1.79, > p.05). This analysis indicated that the four treatment groups were not significantly different from each other on arousal. Since there were no significant differences on arousal among the four treatment groups, it was not necessary to use covariance to partial out the effects of arousal in testing for the treatment group effects on the criterion task. It was decided, however, to perform it since the covariance technique may serve at times as a local control in reducing error variance. The test for homogeneity of regression on the three groups (MP, PC, SC) justified the application of covariance. The results of the sub-analysis using covariance on the three groups showed a highly significant F score (F = 27.83, p < .05). The Tukey post-mortem test[4] results indicated that mental practice subjects were significantly better in performance than either the placebo control or strict control groups after partialling out the effects of arousal. Therefore, the difference was due to the treatment effects and not to levels of arousal or motivational states.

The two-way analysis of variance adequately tested the null hypothesis and indicated a significant F score (F = 31.38, p < .05) for the treatment groups. Post-mortem tests indicated that the mental practice and physical practice groups were significantly better than both control groups, but did not differ significantly from each other.

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[4] George W. Snedecor, *Statistical Methods* (5th ed.; Ames, Iowa: The Iowa State College Press, 1956), pp. 249-252.

A significant interaction term ($F = 3.28$, $p < .05$) indicated that arousal and treatment were not entirely independent. Post-mortem tests indicated that in the high and low arousal classifications the mental practice group was significantly better in performance than either of the control groups, but in the middle arousal classification the differences were not significant. The physical practice differences were significant from both control groups on all levels of arousal; however, no significant differences were found between the physical practice and mental practice groups on any level of arousal. The control groups did not differ significantly from each other on any level of arousal.

Conclusions

Post-mortem tests for treatment effects indicated that the mental practice and physical practice groups were significantly better in performance than either of the control groups, but the differences between the mental practice and physical practice groups were not significant. Post-mortem results for the significant interaction term indicated that the mental practice group differed significantly from both control groups in the high and low arousal classifications. On these stastical results, the null hypothesis of no difference was rejected.

The covert process of mental practice apparently can be interpreted in favor of a learning hypothesis not attributable to differential arousal (motivational) variables induced by experimenter bias.

A non-significant difference between the four treatments on arousal indicates that previous criticism concerning differential arousal levels induced by experimenter bias is probably unfounded.

Manifest Anxiety and Physical Fitness[*]

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INTRODUCTION

Purpose

The purpose of this paper is to report on a series of studies pertaining to manifest anxiety and physical fitness designed to determine: (1) the relationship between manifest anxiety and selected physical fitness measures, and (2) the effects of training on manifest anxiety.

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[*] The authors appreciate assistance from Miss Jane Babka, Dr. T. K. Cureton, Miss Mary Dwyer, Dr. Paul Fardy, Mr. Larry Gettman, Dr. Harold Holmes, and Mrs. Patricia (Scharr) Mavec.

Importance

The anxieties and tensions of modern life are the prelude to many psychological and physiological disorders which afflict our society. Exercise is now being advocated as indispensable for a healthy and productive life.[1,2,3,4,5] There is, therefore, a necessity to closely examine the relationship that exists between psychological and physiological variables and the effect of regular exercise on manifest anxiety.

Limitations

Several interesting aspects of manifest anxiety and physical fitness will not be discussed; e.g., the relationship between anxiety and motor learning and performance has attracted a great number of researchers recently.[6] Much work has been done with pathological subjects; however, our primary emphasis as physical educators has been in development and maintenance of high levels of positive health in "normals" rather than cure of pathological cases, therefore "high anxiety" in this paper refers to a high level in normal subjects that has not been identified as pathological cases.

Review

Both Cureton[7] and Cattell[8] have reported significant inverse relationship between manifest anxiety and physical fitness measures. The correlations have been low to moderate, seldom higher than .35 (thus accounting for no more than 10-15% common variance). The low correlations are not surprising since the correlations between different self-report anxiety scales usually run less than .50.[9] In addition, the correlations between physiological measures that have been used to measure anxiety such as heart rate and blood pressure usually range from .15 to .45.[10,11]

Jetté[12] and Holmes[13] studied middle-aged men who were tested nine years apart. One group of men had trained regularly at least 3 days/week for the last several years (Cureton's program); one group had trained regularly, but less than 3 days/week; and one group had been relatively sedentary. Holmes found signi-

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[1] R. B. Cattell, "Some Psychological Correlates of Physical Fitness and Physique," *Exercise and Fitness* (Chicago: Athletic Institute, 1960).

[2] T. K. Cureton, "Anatomical, Physiological and Psychological Changes Induced by Exercise Programs in Adults," *Exercise and Fitness* (Chicago: Athletic Institute, 1960).

[3] T. K. Cureton, *The Physiological Effects of Exercise Programs on Adults* (Springfield, Illinois: C. C. Thomas, 1969).

[4] W. Raab, "Degenerative Heart Disease From Lack of Exercise," *Exercise and Fitness* (Chicago: The Athletic Institute, 1959), pp. 10-19.

[5] W. Raab, "Training, Physical Inactivity and the Cardiac Dynamic Cycle," *Journal of Sports Medicine and Physical Fitness* (1966), 6:38-47.

[6] C. D. Spielberger, *Anxiety and Behavior* (New York: Academic Press, 1966).

[7] Cureton, op. cit., 1960.

[8] Cattell, op. cit., 1960.

[9] Spielberger, op. cit., 1966.

[10] B. Don Franks, "Effects of Different Amounts and Kinds of Training on Selected Fitness Measures," *Exercise and Fitness* (Chicago: Athletic Institute, 1959) (in press).

[11] Spielberger, op. cit., 1966.

[12] Maurice Jetté, "The Long-term Effects of an Exercise Program on Selected Physiological and Psychological Measures in Middle-aged Men" (Unpublished Ph.D. Thesis, University of Illinois, 1969).

[13] H. Holmes, "Long-range Effects of Training on Chronic Complaints of Middle-aged Men" (Unpublished Ph.D. Thesis, University of Illinois, 1969).

ficantly greater reduction in chronic complaints in the training groups. Jetté, using Cattell's 16 P.F., found that the trained groups were less anxious. Unfortunately, there were no initial personality measures, so the reason(s) for the difference cannot be determined.

Popejoy[14] studied the effects of training on anxiety. She measured anxiety by psychological measures (Cattell's 16 P.F.) and by selected physiological measures. Although there was some decrease in the psychological measures, there was no significant difference between the training and control groups after 20 weeks of training in middle-aged women. There were significant reductions in the physiological variables—palmar sweat, diastolic blood pressure, heart rate, and increases in various measures from the brachial pulse wave. When she isolated some "highly anxious" subjects, they did make significant reductions in self-report anxiety.

Scope

The effect of various amounts and types of training in 58 sedentary middle-aged men were studied by Gettman,[15] Jetté[16] and Franks and Cureton[17] with consideration given to manifest anxiety.

Dwyer and Scharr,[18] studying the effects of four months of training on sedentary women, and Babka,[19] using college women enrolled in different basic instruction classes, included manifest anxiety as a variable in their studies.

The manifest anxiety scale used throughout these studies was the Pittsburgh Revision of the Taylor Manifest Anxiety Scale.[20] This revision was based on two validation studies[21-22] of the Taylor Manifest Anxiety Scale.[23] It was included in a "Biographical Inventory" used by Franks[24] and Jetté.[25] The 20 anxiety items and the 33 items from the Marlowe-Crowned Social Desirability Scale[26] were assigned positions in the inventory at random.

The physical fitness measures employed included selected physique, motor fitness, respiratory, and cardiovascular measures taken at rest and in response to mental arithmetic[27] and sub-maximal exercise.

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[14] D. I. Popejoy, "The Effects of a Physical Fitness Program on Selected Psychological and Physiological Measures of Anxiety" (Unpublished Ph.D. Thesis, University of Illinois, 1967).

[15] Larry Gettman, "Effects of Different Amounts of Training on Cardiovascular and Motor Fitness of Men" (Unpublished M.S. Thesis, University of Illinois, 1969).

[16] Maurice Jetté, "Progressive Physical Training on Anxiety in Middle-aged Men" (Unpublished M.S. Thesis, University of Illinois, 1967).

[17] B. Don Franks and T. K. Cureton, "Effects of Training on Time Components of the Left Ventricle," *Journal of Sports Medicine and Physical Fitness*, 1969 (9:80-88).

[18] Patricia Scharr, "Effects of Training on the Physique and Cholesterol of Women" (Unpublished M.S. Thesis, University of Illinois, 1969).

[19] Jane Babka, "Effects of Swimming and Basic Movement on Selected Measures of Fitness in College Women" (Unpublished M.S. Thesis, University of Illinois, 1969).

[20] A. W. Bendig, "The Development of a Short Form of the Manifest Anxiety Scale," *Journal of Consulting Psychology*, 1956 (20:384).

[21] A. H. Buss, "A follow-up of the Taylor Anxiety Scale," *Journal of Clinical Psychology*, 1955 (11:409-10).

[22] D. P. Hoyt and T. M. Magoon, "A Validation Study of the Taylor Manifest Anxiety Scale," *Journal of Clinical Psychology*, 1954 (10:357-61).

[23] J. A. Taylor, "A Personality Scale of Manifest Anxiety," *Journal of Abnormal and Social Psychology*, 1953 (48:285-90).

[24] Franks, op. cit., 1969.

[25] Jetté, op. cit., 1967.

[26] D. P. Crowne and D. Marlowe, "A New Scale of Social Desirability Independent of Psychopathology," *Journal of Consulting Psychology*, 1960 (24:349-54).

[27] W. Raab and H. J. Krzywanek, "Cardiovascular Sympathetic Tone and Stress Response Related to Personality Patterns and Exercise Habits," *American Journal of Cardiology*, 1965 (16:42-53).

TABLE 1

Correlation Between Manifest Anxiety and Fitness Measures*

VARIABLE	r	VARIABLE	r
Resting Measures		Ride HR, 4′	—.23
Systolic amplitude of the brachial pulse wave	—.04	Ride HR, 5′	—.22
Rest/work ratio	.26	**Other Measures**	
Systolic blood pressure	—.07	Breath holding	.03
Pulse pressure	—.09	Trunk extension	—.09
Area, BPW	.19	Trunk flexion	—.03
Mechanical systole	.40	Total strength	—.04
Total systole	.42	Strength/pound	.16
Electromechanical lag	.06	Balance	—.03
Ejection period	.38	Vertical jump	—.10
Isovolumetric contraction period	.05	Chins	.08
Tension period	.09	Dips	.09
Cycle time	.43	C-D-VJ	.00
Heart rate	—.36	Ill. Agility run	.04
Diastole	.41	Vital capacity residual	—.08
Ergometer Ride		Age	.09
HR, 0 min.	—.35	Height	—.01
Ride HR, 1′	—.23	Weight	—.17
Ride HR, 2′	—.22	Social Desirability	—.30
Ride HR, 3′	—.25		

* Determined by Pearson Product Moment Correlation Coefficient between the Pittsburgh Revision of the Taylor Manifest Anxiety Scale and selected measures of physical fitness on middle-aged men (N = 58).

The relationship between manifest anxiety and physical fitness variables was determined by correlations, factor analysis, and multiple prediction of manifest anxiety from selected fitness measures in the middle-aged men.

The effect of training of the manifest anxiety scale was determined by pre and post tests in all the studies. In addition, Jetté[28] studied the response to training of men divided into two groups based on their manifest anxiety score (high and low anxiety groups respectively).

RESULTS

Relationship of Manifest Anxiety to Fitness Measures

Although there were some "significant" correlations (see Table 1) between some physical fitness measures and the manifest anxiety scale, all the correlations were low ($<.45$, thus less than 20% common variance) in middle-aged men (N = 58). The highest correlations tended to be with the systolic part of the cardiac cycle (mechanical systole and ejection period). The same low correlations between manifest anxiety and fitness tests were found in college women (N = 54) by Babka.[29] In both studies, manifest anxiety loaded on a specific factor in the varimax factor loadings.

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[28] Jette, op. cit., 1967.

[29] Babka, op. cit., 1969.

TABLE 2

Stepwise Multiple Prediction of Manifest Anxiety*

VARIABLE	CONDITION	R	S.E....	B	PER CENT NET CONTRIBUTION**
Step 1		.48	3.61		
Total Systole	1½′ after mental arithmetic			.48	100
Step 2		.55	3.46		
Total Systole	1½′ after arith.			.56	78.9
Tension Period	5′ post exercise			−.29	21.1
Step 3		.59	3.36		
Total Systole	1½′ after arith.			1.012	74.1
Mechanical Systole	5′ after arith.			.240	17.5
Tension Period	5′ post exercise			.116	
Step 9		.77	3.94		
Diastole	10′ post exercise			1.15	29.7
Heart Rate	10′ post exercise			1.03	23.8
Total Systole	1½′ after arith.			1.07	25.7
Tension Period	5′ post exercise			−.49	5.4
Mechanical Systole	5′ after arith.			−.49	5.4
Systolic Blood Pressure	1½′ after arith.			.44	4.3
Systolic Blood Pressure	1½′ post exercise			−.33	2.4
Agility Run				.32	2.3
Obliquity Angle. . BPW	1½′ post exercise			−.21	1.0

* Manifest anxiety determined by Pittsburgh revision of the Taylor Manifest Anxiety Scale. (2)

** Determined by $B^2/\Sigma B^2$ for each variable. This represents the net contribution of the accounted for variance (R^2) at each step.

Using the middle-aged men, a step-wise multiple regression analysis was performed to determine to what degree the manifest anxiety scale could be predicted from the fitness variables (see Table 2). A multiple correlation of .59 was found after three steps; .77 after nine steps. It was interesting to note that the fitness measures taken after a mental or physical stressor were more highly related to the manifest anxiety scale than the resting measures which would support the relationship between anxiety and tolerance to stress.

Effects of Training

In the middle-aged men, the three-day per week running and calisthenics group made a significantly greater reduction in manifest anxiety (6.5 to 4.5), than a five-day per week running and calisthenics group (7.6 to 7.5), three and five-day per week handball groups and a non-training control group. In a two-day analysis of covariance, this reduction by the three-day running and calisthenics group caused a significant difference between the three and five-day groups; between the running and sports groups; and interaction between the type and amount of training.[30]

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[30] Franks, op. cit., 1969.

No influence on manifest anxiety was found by Babka in a semester of swimming or basic movement in college women; or by four months of running and calisthenics in middle-aged women by Dwyer-Scharr (see Table 3).

Jetté chose eight subjects who scored relatively high on the anxiety scale (HA) and eight subjects who scored relatively low (LA). These subjects were matched in the amount of training for five months. He found that both groups made significantly greater fitness improvements than a non-training control group. He also found that the HA group improved significantly more in resting systolic blood pressure, pulse pressure, and electromechanical lag; in pulse pressure, isovolumetric contraction period, and ejection period following mental arithmetic and systolic amplitude of the brachial pulse wave following a sub-maximal exercise (see Table 4).

In general, he concluded that as a result of his training program the highly anxious subjects improved as much as (and sometimes more than) the low anxious subjects. In the variables where there were greater improvements, the HA group had a poorer initial score. The increased ability of the highly anxious subjects to adjust to mental and physical stressors after training was interpreted as a sensitization to sympatho-adrenergic activity.

Two of the physiological measures that have been used in the study of anxiety have been heart rate and diastolic blood pressure. As reported previously[31] (see Table 5), when comparing the training and control groups in the middle-aged men, after five months of training, the training groups had significantly greater reductions in resting and post-exercise heart rates and diastolic blood pressure.

DISCUSSION

The distinction has been made between trait and state anxiety.[32] Trait anxiety is a rather stable personality characteristic, whereas state (or situational) anxiety is the anxiety experienced in a particular situation or stress condition. Although there is some relationship between the two, some of the confusion in the literature may be due to failure to clearly separate the two. Obviously, the self-report manifest anxiety scale used in these studies was a measure of trait anxiety. The response of the cardiovascular measures to mental and physical stressors might be considered measures of state anxiety.

It would seem plausible that three things are necessary for regular physical activity to influence the trait of manifest anxiety:

1. subject to start with relatively high anxiety;
2. training to be long enough and vigorous enough to make important physical fitness changes;
3. training to be at such an intensity that the subject can adjust to it.

These three points could not be considered much more than hypotheses at this time; however, there is some evidence to support them.

Subjects Must Be Anxious

In the studies by Popejoy and Jetté, it was only when they looked at highly anxious subjects that they were able to find group differences in anxiety. In fact, in the case of the 3 day/week group of men, their reduction was due to shifts made by persons who started with high anxiety and reduced it. These studies need to be repeated with a control group of highly anxious subjects. Either slight changes or no differences at all were found in the studies which did not isolate the highly anxious subjects. The only case where there was a group difference without isolating the highly anxious subjects was in the Jetté study over nine years of training and no initial data were available so that it cannot be deter-

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[31] B. Don Franks, "Effects of Training on Selected Cardiovascular Parameters," Oregon Association for Health, Physical Education, and Recreation Journal, 1968 (2:13-15).

[32] Spielberger, op. cit., 1966.

TABLE 3

Effects of Training of Manifest Anxiety*

INVESTIGATOR	SAMPLE	LENGTH OF TRAINING	MANIFEST ANXIETY SCORE T_1	T_2
Babka[33]	College women	3 months		
	Basic Movement (N = 18)		8.8	9.1
	Swimming (N = 17)		9.5	9.6
	Control (N = 19)		6.0	6.1
Cureton-Franks[34]	Middle-aged men	5 months		
	Run/3 day/week (N = 11)		6.5	4.5
Gettman[35]-Jetté[36]	Run/5 day/week (N = 15)		7.6	7.5
	Handball/3 day/week (N = 10)		3.1	3.8
	Handball/5 day/week (N = 7)		3.7	4.6
	Control (N = 15)		4.9	4.4
Dwyer-Schaar[37]	Middle-aged women	4 months		
	Run/3 day/week (N = 11)		3.3	4.0
	Control (N = 6)		7.0	8.1
Jetté[38]	Middle-aged men	5 months		
	High Anxious, run 3-5 days/week (N = 8)		11.3	9.5
	Low Anxiety, run 3-5 days/week (N = 8)		3.3	3.5

* Determined by Pittsburgh revision of Taylor Manifest Anxiety Scale.

mined whether the difference was there prior to training.

It may not be desirable to reduce the anxiety of persons with moderate levels —it may be that there is an "inverted U" relationship between positive health and anxiety, as there appears to be in performance; i.e., the optimum level is in between the two extremes. Although high anxiety levels appear to be unhealthy, it does not follow that the lowest level is the best.

Training Must Be Long and Vigorous Enough to Make Important Fitness Changes

Two of the differences between the two studies that had absolutely no anxiety changes and the studies that showed some changes were: (1) they trained for a shorter period of time; and (2) the fitness changes were less impressive. To the extent that there is a physiological component to manifest anxiety, it is important that the training program be long enough and vigorous enough to affect the important physical fitness measures.

Training Should Be of Such Intensity That the Subjects Can Adjust To It

Making the fitness changes is not the only criterion. For example, in the study of the men who trained with Cureton's program 3 and 5 days per week, the 5 day/week men made fitness improvements as great as the 3 day/week and there were just as many highly anxious subjects in the 5 day/week group, but the 3 day/week group had a reduction in manifest anxiety whereas the 5 day/week group did not. One possible explanation for this is that the 5 day/week men were unable to adjust to the training program; whereas, the "work a day, rest a day"

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[33] Babka, op. cit., 1969.
[34] Franks and Cureton, op. cit., pp. 80-88.
[35] Gettman, op. cit., 1967.
[36] Jetté, op. cit., 1967.
[37] Scharr, op. cit., 1969.
[38] Jetté, op. cit., 1967.

TABLE 4

Group Means—Jette (14)

Variables	Initial Test			Final Test*		
	H.A.	L.A.	Control**	H.A.	L.A.	Control
Systolic Amplitude (cm)						
Rest	1.09	1.05	1.06	1.37	1.41	1.19
1½ min. after Prob.	1.13	1.10	1.10	1.46	1.36	1.22
1½ min. after Exer.	1.07	1.10	1.12	1.43	1.31	1.10
5 min. after Exer.	0.98	1.03	.97	1.35	1.22	1.11
Systolic Blood Pressure (mmHg)						
Rest	120	112	115	106	113	115
1½ min. after Prob.	122	116	117	111	111	116
1½ min. after Exer.	126	130	130	120	122	124
5 min. after Exer.	121	121	120	115	111	118
Diastolic Blood Pressure (mmHg)						
Rest	78	74	73	70	72	73
1½ min. after Prob.	78	76	75	70	72	73
1½ min. after Exer.	79	78	78	69	68	72
5 min. after Exer.	79	78	76	68	68	73
Pulse Preserve (mmHg)						
Rest	41	38	42	36	41	42
1½ min. after Prob.	43	40	42	39	41	44
1½ min. after Exer.	47	53	52	49	55	52
5 min. after Exer.	43	42	44	46	43	45
Electromechanical Lag (sec)						
Rest	.054	.049	.048	.045	.046	.046
1st Arith. Prob.	.048	.045	.041	.042	.043	.044
2nd Arith. Prob.	.049	.046	.044	.042	.043	.044
1½ min. after Prob.	.051	.049	.048	.045	.045	.044
1½ min. after Exer.	.049	.043	.046	.043	.046	.045
5 min. after Exer.	.054	.047	.048	.043	.048	.046
Ejection Period (sec)						
Rest	.29	.28	.28	.30	.30	.29
1st Arith. Prob.	.28	.26	.26	.28	.28	.28
2nd Arith. Prob.	.28	.27	.27	.30	.29	.28
1½ min. after Prob.	.30	.28	.28	.30	.30	.29
1½ min. after Exer.	.26	.24	.24	.28	.28	.25
5 min. after Exer.	.28	.27	.26	.29	.29	.27
Isovolumetric Contraction Period (sec)						
Rest	.063	.061	.050	.060	.060	.052
1st Arith. Prob.	.062	.062	.050	.056	.056	.053
2nd Arith. Prob.	.062	.062	.052	.063	.060	.054
1½ min. after Prob.	.055	.060	.048	.065	.057	.056
1½ min. after Exer.	.035	.037	.027	.043	.039	.029
5 min. after Exer.	.044	.050	.036	.052	.046	.038

* Training was a minimum of three days per week for five months.

** H.A. = high anxiety group (N = 8).
L.A. = low anxiety group (N = 8).
Control = non-training control group (N = 8).

TABLE 4 (continued)

Variables	Initial Test H.A.	Initial Test L.A.	Initial Test Control**	Final Test* H.A.	Final Test* L.A.	Final Test* Control
Heart Rate (beat/min.)						
Rest	61	63	70	55	56	68
1st Arith. Prob.	76	79	89	66	68	74
2nd Arith. Prob.	72	75	83	63	67	70
1½ min. after Prob.	62	65	70	55	58	69
Ergometer Ride						
0 min.	78	82	82	66	69	83
1 min.	118	118	121	106	107	116
2 min.	125	132	134	117	113	125
3 min.	128	136	140	117	117	131
4 min.	132	140	146	117	121	133
5 min.	134	141	145	117	122	136
1½ min. after Exer.	77	87	91	67	70	88
5 min. after Exer.	71	78	84	58	64	84
Diastole (sec)						
Rest	.63	.56	.48	.74	.67	.50
1st Arith. Prob.	.41	.40	.34	.52	.50	.47
2nd Arith. Prob.	.46	.43	.47	.59	.51	.49
1½ min. after Prob.	.58	.54	.48	.72	.65	.49
1½ min. after Exer.	.46	.39	.37	.57	.51	.38
5 min. after Exer.	.49	.42	.38	.62	.57	.42

TABLE 5

Effects of Training on Heart Rate and Blood Pressure (9)

Variable	Initial Test Training (N = 43)	Initial Test Control (N = 15)	Final Test* Training	Final Test* Control
HR (beat/min.)				
Rest	64	64	59***	66
1½′ Post Exercise	83	82	69***	84
5′ Post Exercise	76	75	63***	78
Ergometer Ride**				
5′	138	139	118***	135
SBP (mmHg)				
Rest	117	114	112***	115
1½′ Post Exercise	128	125	123	122
5′ Post Exercise	121	116	115	116
DBP (mmHg)				
Rest	75	75	70***	74
1½′ Post Exercise	79	80	69***	75
5′ Post Exercise	78	77	70***	74

* Training was a minimum of three days per week for five months.

** Five minute Ergometer ride, 4500 ft. lbs./min., 40 r.p.m.

*** Training group significantly better than control group, $p < .05$.

routine of the 3 day/week group allowed them to adapt better to the training. Please note that these were sedentary middle-aged men in the first months of training—other samples will be able to adapt to other intensities.

Two of the fitness measures that have been used as measures of anxiety have been HR and BP. It has been shown that physical training can cause reduction in both of these at rest, during and after physical exercise which significantly exceed changes made by non-training control groups. Whether this ability to "Adapt" to physical stressors will extend to non-physical stressors is questionable. Although the question: "to what degree are the results of physical training specific?" is certainly not a new question. We have not seen it applied in this area. An interesting question for future investigation is: "since regular, vigorous physical training can cause significant changes in physiological measures that have been used to measure anxiety, can it affect a person's physiological response to non-physical anxiety-producing situations?"

Finally, if anxiety does include physiological, psychological, and sociological components as one would suspect, no person in any one of these areas can adequately study it. One of the major needs is for valid instruments (in all areas); another is for cooperative efforts to study anxiety including persons knowledgeable in the different aspects.

One type of experimental treatment that has been largely neglected in the study of anxiety, but that should be included, is the long-term effects of some of the treatments that have been used in the study of acute effects. We not only need to know the immediate effects of various kinds of stressors, including physical ones, but also the long-range effects of habitual exposure to these stressors (physical training being habitual exposure to one form of physical stressor). Although more time-consuming to conduct and more difficult to control, it may well be the more important question to ask.

CONCLUSIONS

Within the scope of these studies, it is concluded that highly anxious subjects can make impressive physical fitness improvements as a result of regular, vigorous physical activity. If the training is long enough and vigorous enough to make important fitness changes, and of an intensity to allow adaptation to the training, there is some evidence that physical training can reduce manifest anxiety in HA subjects. Self-report manifest anxiety has low to moderate relationship to selected physical fitness measures.

RESEARCH ABSTRACTS

Approximately 35 members made requests to present studies at the Research Section Meetings. Those whose works were not selected were encouraged to send abstracts so that fellow members might learn of their works through the PROCEEDINGS. The following have consented to share their work in this way.

AN EXPERIMENTAL EVALUATION OF A REQUIRED FOUNDATIONS OF PHYSICAL ACTIVITY COURSE FOR COLLEGE FRESHMEN

John D. Ingold
Goshen College

Purpose

Five specific aspects of male students' progress in a required Foundations course were investigated: (1) circuit training difficulty, (2) the quality of a Foundations knowledge test, (3) three kinds of instructional methodology (note-taking, physical practice, and visual aids) as it helps one acquire, forget or retain knowledge, (4) the amount of physical fitness change, and (5) the subjects' evaluation of the course.

Procedure

An experimental group of 99 subjects were divided into eight treatment groups within a 2x2x2 factorial design. Seventy-four subjects were used in two control groups. The factors were note-taking during TV, physical practice during TV, and visual aids during physical conditioning. None and some made up the two levels of each factor. Subjects had class three times a week for eight weeks with each class having ten minutes of TV followed by thirty minutes of physical conditioning.

Findings

The experimental group's knowledge and physical fitness progress over the controls resulted in *F* ratios (ancov) of 217.83 and 91.13, respectively. Visual aids helped students acquire knowledge and decrease forgetting. Taking notes without reviewing them had no significant value over not taking them.

Subjects had an average increase of 18.22 correct answers on the knowledge test due to cramming as compared to 16.03 due to class instruction. A correlation of + .97 was found between the final written test score and the percentage gain of possible gain on the written test.

The written test had a Kuder-Richardson 21 reliability coefficient of + .875. The factor analysis of the knowledge test showed Factor I, a general intelligence factor, accounted for 56.78 per cent of the total sum of squares.

Eighty-eight per cent of the subjects stated that the Foundations course was average or above average in educational importance.

EFFECTIVENESS OF CLEATLESS, HEELED FOOTBALL SHOES IN THE PREVENTION OF SERIOUS DAMAGE TO THE KNEE JOINT

John B. Kress
United States Military Academy

Purpose

To investigate the use of various type football shoe heels in reducing knee injuries.

Hypotheses

1) The substitution of rubber heels for conventional cleated-heel football shoes will reduce the incidence and severity of knee injuries.
2) The substitution of plastic discs for conventional cleated-heel football shoes will reduce the incidence and severity of knee injuries.

Procedure

The sample consisted of all 408 cadet members of 24 randomly selected intramural football teams at the United States Military Academy (USMA). Eight of the teams were equipped with conventional cleated-heel football shoes, eight with flat-heeled shoes, and eight with plastic discs in place of heel cleats. These teams participated in 17 required competitions and, generally, an equal number of practices. Shoes were distributed to assure that teams with different types would compete under similar field conditions. Injuries requiring hospitalization were considered severe with those cases necessitating surgery as the most severe. Others were considered as either mild or moderate depending upon the amount of playing time lost.

Findings

Twenty-nine knee injuries of all types were recorded among the 408 players. This represented a 7.1% incidence or one injury per 246 man-hours of competition. Seven of these injuries were severe with four requiring surgery. The examination of these injuries according to the type of heel used indicated that injuries to persons wearing rubber heeled shoes were not only less frequent but also less severe than injuries to persons wearing a conventional cleated shoe. No significant differences were found, however, between the shoes with plastic discs and those with conventional cleats.

STRAIGHT LINE PHILOSOPHY

Charles Frank Lappenbusch
Western Washington State College

Purpose

To improve the teaching process.

Hypotheses

A workable philosophy has been composed which will reduce all natural and deliberate game strategy confusion in controlling human conduct within the straight line enclosures, namely, the basketball court and the football field; and further delimited specifically to football offense, football defense and basketball defense.

The basic dimensions of this workable philosophy are Time, Area and Enclosure. The homo sapien can advance by acting in an anticipatory way directed by the potential of the human cortex.

Procedure

Establish an aim. The aim must fit the enclosure (the field). The participating human beings and the processes direction, product or goal.

The principles which direct the coordination of human's conduct to the vertical aim (such as the vertical on which to advance the ball by kick, run or pass) work free of circular and spiral confusion and are protected from the opponent's deliberate confusion by pennate angle actions which are positioned by anticipatory movement which allows possession of position. Possession of position is a continuous process carried on aggressively with flexible progressive adjustment scooped by utilizing Time, Area and Enclosure.

Findings

Man using his full potential, free of systematized, dictatorial subserviency and operating under a workable philosophy has no limitations other than man himself. Evidence is now available from coaches who will tell the whole truth and not hide this great potential for their own winning interests.

AN ANALYSIS OF THE PERSONAL CONSTRUCTS OF BEGINNING SWIMMERS USING THE REPERTORY GRID

Harold A. Lerch
University of Florida

Purpose

To (1) identify and gain personal insight into the self-image and construct systems of ten male non-swimmers; (2) evaluate any change in construct relationships during swimming instruction using the Repertory Grid; (3) determine to what extent a group of men shares similar motives and apprehensions in learning how to swim.

Hypotheses

Many swimming instructors believe it is difficult to teach adults how to swim because of the age factor which has helped establish pre-existing fears. These fears play an important role in hindering the adult's learning capacity. If they are identified and understood by the instructor, more efficient and successful learning can materialize.

Procedure

College-age students were taught how to swim four times a week for nine weeks. During pre-instruction each subject's constructs were elicited through personal interviews and subjected to interpretation by utilizing the Grid. In the swimming instruction period the Grid was administered to each subject every two weeks to observe construct relationship changes. The post-instruction consisted of a personal interview and two follow-up Grids. A case study of each man was written considering his personal construct system in relation to learning how to swim.

Findings

(Major conclusions based upon collective case studies)

1) The class believed the first three to four periods of instruction as vital to their success or failure.
2) Formal testing procedures implied a tenseness not conducive toward learning to swim.
3) The men did not wish to learn swimming on a co-educational basis. Body self-consciousness was a determining factor.
4) A pre-instruction interview alleviated apprehensions and alerted the instructor to special learning problems.
5) The instructor was envisioned as being patient, understanding, and approachable.

AN INVESTIGATION OF LEVELS OF FUNCTIONING OF INNOVATIVE PRACTICES

David K. Leslie
University of Iowa

Purpose

The purpose of this study was to investigate differences between levels of functioning of 26 selected innovative practices (IP) in physical education (PE) programs for boys and basic education (BE) programs (defined in this study as English, science, mathematics and social studies).

Hypotheses

There is no significant difference between levels of functioning of IP in groups within and between PE and BE programs.

Procedure

Data was obtained from questionnaires returned by 67 principals and 75 heads of PE Departments in schools that had utilized Stanford's School Scheduling System between 1965 and 1969. Schools were ranked by number of UP utilized in PE and in BE programs and high and low innovating groups were identified in each program. Mean ratings of levels of functioning of each IP were obtained for each group in each program and *t* tests for significant differences between means of each IP for each group in each program were made.

Findings

Differences that are significant at the .05 level were obtained for only seven of the 104 comparisons. Significant differences were found between: (1) high and low groups for "Special with-in-class grouping" in PE programs and "Independent Study" in BE programs, and (2) PE and BE programs for "Curriculum revision and development," "Flexible scheduling," "Large to small group instruction," "Resource center," and "Unusual use of texts." In general, once practices were implemented they tended to function equally well in all groups of PE and BE programs. In conclusion, no relationship appears to exist between levels of functioning of practices and levels of innovativeness of schools.

A COMPARISON OF THE EFFECT OF SPECIFIC PHYSICAL FITNESS PROGRAMS AND SELECTED SPORTS ON PHYSICAL FITNESS TEST SCORES

Clyde Partin
Bill Brenner
Emory University

Purpose

To compare the effect of three different types of physical fitness programs and three different sports on physical fitness test scores of 105 male freshmen enrolled in the required physical education classes.

Hypotheses

There were two null hypotheses: 1. Each class would not improve their test scores after being put on a specific physical fitness program and selected sports activity. 2. There would be no difference in the change in test scores between the different classes.

Procedure

The students were tested at the beginning, middle and end of the quarter using a five item test which included pullups, Cooper's 12 minute run, 2 minute sit-ups, Illinois agility run and the chalk jump.

One fitness program consisted of five weeks of circuit training (2 days/week) and interval training (1 day/week) followed by 4 weeks of wrestling. Another group was given interval training (1 day/week) and distance running (2 days/week) for five weeks of distance running (1 day/week) circuit training (1 day/week) and interval training (1 day/week) and four weeks of, in one case soccer, and gymnastics in the other case. Comparisons were then made within the groups and between the groups to see what difference, if any, existed at the testing intervals.

Findings

In the comparison of the 1st and 2nd tests within the groups, several, but not all groups showed significant gains on certain individual tests, and the total scores of all 5 tests showed significant changes (1st vs. 2nd) for all groups except the 12:00 group.*

Scores were generally insignificantly different between the 2nd and 3rd tests, suggesting the inability of the selected sports to improve fitness test scores.

To compare the groups with each other the ranking for the five classes based on mean total change between the 1st and 2nd tests were the following:

Class	
9:00	68.62
10:00	57.96
8:00	51.22
11:00	35.88
12:00	33.72

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* Test scores comparing these mean differences indicated a significant difference between 9:00 and 11:00, 9:00 and 12:00, and 10:00 and 12:00.

A STATISTICAL ANALYSIS OF MEN AND WOMEN LEAGUE BOWLING SCORES

Norman E. Showers
Southern Illinois University

Richard Gerber
Edwardsville High School

Purpose

The purpose of this study was an attempt to determine if there were identifiable differences within and between male and female bowlers relative to score groupings of games bowled in ABC or WIBC sanctioned league and tournament play.

Hypotheses

There are some identifiable differences between the average bowling scores of male and female bowlers.

Procedure

Male and female individual game scores bowled in ABC/WIBC sanctioned leagues or tournaments were analyzed according to the average number of strikes, spares, misses and splits for each sex and score groups. A total of 2301 games (1415 men, 886 women) were analyzed by utilizing some twenty score groups. An analysis of each game was based on the number of total strikes, spares, misses, splits, single and multiple strikes and if there was a last ball strike or spare.

A comparison was made based on the differences between the score groups (80-89, 90-99, etc.) of men, women and both men and women. Five tables were used for comparisons.

Findings

Within the same average score categories, men tended to average more single and total strikes, multiple (4 or more) strikes, and women averaged more spares, doubles and turkeys, and total good marks per game. In most cases the differences were rather small.

Women tended to get more good marks per game within the score groups than men although men tended to have a higher average per game with the same or fewer good marks per game which may reflect possible speed and ball weight difference.

As expected, the average good marks and strikes decreased as the score groups decreased. Misses increased with the lower score groups.

Based on the data, both men and women need to average better than five strikes per game to maintain a 200 average, four-and-one-half strikes per game for a 190 average, and better than four strikes a game to average in the 180 category.

A STATISTICAL STUDY OF INTRAMURAL ATHLETIC AND RECREATIONAL PARTICIPATION AND ACADEMIC SUCCESS

Paul R. Varnes
University of Florida

Purpose

The purpose of this study was to determine if a relationship exists between grade point average, Florida State-Wide Twelfth-Grade Test score, and the extent, by hours, of intramural athletic and recreational participation.

Hypotheses

(1) There will be a relationship between hours of intramural athletic and recreational participation and academic success.

(2) There will be a relationship between hours of intramural athletic and recreational participation and scores on the Florida State-Wide Twelfth-Grade Test.

(3) The relationship between intramural participation hours and grade point average will be different for seniors and for freshmen.

Procedure

Five hundred male students who were registered during the fall term for twelve or more hours of course work at the University of Florida were surveyed as potential subjects for this study. The sample was stratified to include 150 championship team members from the four dormitory leagues, two fraternity leagues, and one independent league; 150 club participants including the archery, fencing, judo, karate, sailing, wrestling, gymnastics, water ski, and barbell club members; and 200 subjects who were neither members of championship teams nor club members. Complete data was obtained for 405.

Findings

No significant linear or curvilinear relationship was found between extent of participation hours and grade point average, or extent of participation hours and Florida Test scores.

It was determined that seniors participate in intramural activities significantly more at the .01 level and make significantly higher grade point averages at the .0005 level than do freshmen. It was further determined that freshmen made significantly higher, at the .025 level, on Florida Test scores than did seniors. This evidence supports the conclusion that some factor, or factors, not common to the two groups is used in the determination of grades.

Those students who participated in intramural activities between 101 and 200 hours during the 32 week period were, as a group, significantly superior in grade point average at the .025 level or better, to any other group except for the 400 hour or above participants.

No evidence was found to support the conclusion that an extensive program of intramural athletics and recreation reduces probability of success, as measured by grade point average, of college students.

THE VALUES OF PHYSICAL EDUCATION: A SCIENTIFIC-PHILOSOPHICAL INVESTIGATION

Philip K. Wilson
Wisconsin State University—La Crosse

Purpose

The purpose of this study was to attempt to arrive at a conclusion as to the values of physical education within our modern day educational structure.

Hypotheses

The null hypothesis for this study was as follows: The benefits received by the individual participant in physical education are not of value in our modern day society, and therefore, physical education does not deserve to be a part of the established curriculums.

Procedure

The investigator attempted to come to a conclusion as to acceptance or rejection of the null hypothesis through utilization of collected and/or deducted philosophical and scientific evidence.

Findings

The investigator concluded that the philosophical arguments in favor of inclusion of physical education in our present day curriculums are as follows:

1) The impossibility of separating the human body as to physical and mental components.
2) The ever increasing amount of time the average American has available for leisure activities.

Scientifically one must support the inclusion of physical education in our modern day educational structures due to the importance of neuromuscular skill and organic development to the individual. The question arises, however, as to whether physical education programs have established as primary instructional-developmental objectives, 1) neuromuscular skill applicable to leisure activities, and 2) organic efficiency and effectiveness.

The general conclusion of this study is that in the desirable situation, the values of physical education are great enough to warrant inclusion of such in our modern day educational curriculums. However, due to non-existent or undesirable objectives, many physical education programs are presently inadequate and may soon be discarded from involved educational curriculums.

A BRIEF DESCRIPTIVE HISTORY OF GRADUATE STUDY IN PHYSICAL EDUCATION IN THE UNITED STATES TO 1950

Earle F. Zeigler
University of Illinois

Purpose

To trace the development of graduate study in physical education from its early beginnings in the 1890's through to the time (the late 1940's) when it was deemed necessary to hold the first national conference on graduate study.

Hypotheses

Perhaps not applicable, inasmuch as the objective was to begin investigation into the history of this aspect of our work. Basically, therefore, the belief is that a number of further studies need to be made so that we may know better, through careful analysis and assessment, where we have been.

Procedure

Broad historical method involving collecting, analyzing, and reporting of the available data.

Findings

In order to understand why and how graduate study in physical education got its start, the outline of the history of undergraduate professional preparation (and its beginnings) should be understood. Such preparation began first in the U.S. in 1861 when Dio Lewis started the first 1-week diploma course. In slightly more than 100 years since that time, highly significant changes and developments have taken place in the field. Very little graduate study of a truly scientific or scholarly nature was conducted prior to the third decade of the twentieth century. The first doctoral degree recipient graduated from the Y.M.C.A. Graduate School of Nashville in 1925, and the first doctoral students graduated from Columbia Teachers College and New York University, respectively, in 1926. Between 1926 and 1949, some 54 colleges and universities began Master's degree programs in physical education. In 1942 some 56 altogether had offered graduate major programs. There is some evidence that early identification too largely with schools of education might have hindered growth in certain ways. In 1946 it was reported that 20 universities offered doctoral degrees with a major in physical education. There was no true consensus as to what constituted graduate study. There was a need for a national conference, and this was scheduled for January, 1950.

INTERNATIONAL RELATIONS

Reflections on Trans-Atlantic Relations in Physical Education

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I am attracted by the increasing use of the term "international education" not so much because it purports to define a particular type of methodological approach for relating diverse cultural systems in education, but because the term, as I prefer to interpret it, is concerned with cross-national relations, with exchanges in educational information and materials, and above all, with meetings of personnel from different cultures for discussion, consultation, study, and research. Viewed in this light 'international education' and particularly 'international physical education' seems to me to have real meaning and purpose emphasizing personal communication, the exchange of ideas, and cooperative international projects. There is no intention here of reducing the importance of formal comparative physical educational studies which are concerned primarily with the study and analysis of foreign systems against the background of relevant "educational-societal" data, and ideally, with the formulation of appropriate educational policies. My purpose here is rather to emphasize the value of the meetings between workers in different countries in order to clarify interpretations, to plan and conduct cross-cultural studies and to field-test aspects of foreign educational systems of work. Some illustrations may make these points clearer.

The International Committee for the Sociology of Sport has, since its inception in 1964, grown to include representatives from 27 countries who attend seminars and workshops in order to discuss their notions and interpretations with respect to sport in society and to indicate the particular role of sport in sociological theory—and, presumably, in physical education theory. The individuals concerned have undoubtedly found great value in exchanging views and ideas with colleagues in other countries of different socio-cultural structures and different ideologies. The net result is that the mutual reinforcement, coming from such formal and informal meetings in widely separated parts of the world, has led very quickly to the delineation of a highly important discipline directly related to physical education. It is particularly gratifying to note that the members of this international committee have plans well advanced for a large cross-cultural research project to supply further descriptive information and to test some formulated hypotheses in different cultural settings.

It would, of course, be wrong to think that efforts of this sort aimed at bringing people from different nations together in the cause of international discussion and interpretation of sport and physical education are only recent occurrences. The current proliferation of various international conferences might lead one to take that point of view but attempts at establishing international forums have a long history. In 1881, the first international organization for sports and physical education was established as the International Gymnastics Federation. Coubertin's International Congress on Physical Education, which took place in 1889, is regarded as a milestone in the history of comparative studies and his emphasis on educational themes for discussion in the first International Olympic Committee testified both to the importance he placed on the pervasive educative value of sports and to the function he saw the Olympic movement playing as a forum for physical educators.

In 1913, before the outbreak of the First World War, a major international conference—on "the psychology and physiology of sport"—took place in Lausanne. The International Federation of Educative Gymnastics was formed in 1923 (in 1930, the name was changed to International Federation of Ling's Gymnastics and then to the Federation International d'Education Physique—F.I.E.P.—in 1953). In 1927, the League of Nations took an interest in physical education when its Health Committee commissioned E. Piasecki of Poland to make a tour of thirteen countries to study physical education. One year later, at the time of the Winter Olympic Games, the sports doctors accompanying the various teams decided to establish the Federation International de Medicine Sportive (F.I.M.S.). At about the same time, Coubertin set up the Bureau International de Pedagogie Sportive (B.I.P.S.) in Lausanne. Before the outbreak of the Second World War, there were several movements aimed at "international physical education," three of which looked promising. The League of Nations called for a "scientific union for physical education," an "International Olympic Institute" was created after the Berlin Olympics (1936) and there were some serious discussions during the First Lingiad of 1939. Unfortunately, none of these efforts made any significant development.

One major international influence—the Y.M.C.A.—had however, been constantly influencing developments since 1905 when the first Bachelor and Master degrees for physical education attracted world-wide interest. Y.M.C.A. physical directors were recruited from countries other than the U.S.A., and Geneva, as well as Springfield, became centres for International Colleges of Physical Education. During the war, the "Inter-Allied Conference on the Wider Aspects of Physical Education" called yet again for an international organization, and ten years later, in 1952, Unesco passed its first resolution on physical education. By 1956, plans for a fully comprehensive and representative organization for sport and physical education were put forward at Melbourne during the World Conference on Physical Education. In 1959, Unesco sponsored the Helsinki conference on "Sport, Work and Culture," and from this conference arose the final constitution of the International Council of Sport and Physical Education (I.C.S.P.E.) which now has Unesco consultative status. Unesco also gives consultative status to the W.C.O.T.P.'s (World Confederation of Organizations of the Teaching Profession) to the International Council on Health, Physical Education and Recreation (I.C.H.P.E.R.) and to the International Recreation Association (I.R.A.). I.C.H.P.E.R. represents teachers whose organizations are members of W.C.O.T.P. and the I.R.A. is a broad "recreational" organization covering libraries and hobbies as well as physical education. F.I.M.S. has a working relationship with the I.O.C. and with W.H.O. I.C.S.P.E., I.C.H.P.E.R. and F.I.M.S. agreed in Madrid (1966) to collaborate on documentation, research and the planning of a single conference to run concurrently with the Olympic Games of 1968. Unesco, therefore, gives a "focus" today which augurs well for international studies.

If I may return to my theme and try to illustrate my view of the functional and dynamic interpretation of "international (physical) education" by referring to examples of cross-national studies. One of the constant caveats to students of comparative education studies is to be careful of making comparisons without giving due regard to the social, economic and political setting in which the education system exists. Even more important in comparative evaluations would seem to be the caveat that what works in one culture may not work in another due to temperamental or personality differences reflecting not only reaction to the physical and social environment, but also to possible innate abilities. A researcher, for example, aiming to test the generality of a relationship or proposed theory might feel bound to replicate his studies with subjects of different cultures with a view to establishing broader based validation for his initial findings. Ismail[1] has taken this course of action in the pursuance of cross-cultural validation for his 'integrated development' postulates based on his findings relating motor aptitude to intellectual performance among American children. Having established in four separate American studies the nature and extent of the relationship between the motor and intellectual areas and having demonstrated the predictive power across the domains, he wished to know if his findings held good for children outside America. He consequently established contact with fellow workers in the University of London, England, and made arrangements for complete and accurate replication of his studies in England under his own personal supervision. The English results in fact, confirmed the apparent generality of his earlier findings. Similar factor structures were found to explain the relationship between the motor and intellectual test measures and the predictive possibilities from motor aptitude to intellectual performance were similar to those found in the American studies. This simple example of international collaboration and exchange for the purposes of testing theories seem to be the essence of 'international (physical) education.' It represents a dynamic and functional approach to understanding the factors which may be important in evaluating the educational structure in other cultures. Many of the emerging international associations which have relevance to physical education are encouraging this sort of movement and collaboration between post-doctoral workers around the world. The American Association for Sports Psychology, for example, have recently established a bureau for research workers wishing to contact foreign colleagues and institutes engaged in similar specialisms so that appropriate exchange of personnel may be effected and so that more comprehensive cross-national research projects may be planned.

If sufficient funds are available and researchers are big and brave enough, a direct and comprehensive attack may be made on identifying national similarities and differences in characteristic ways of considering physical education. All that is needed here is a researcher of indomitable spirit, willing and permitted to travel for long periods to various countries, able to induce foreign colleagues to prepare the ground and capable of devising measuring instruments which have international relevance. Kenyon's[2] remarkable and laborious study "Values Held for Physical Activities by School Children in Canada, U.S.A., Great Britain and Australia" is a fine example of this kind of international research which permits real comparability between the attitudes and values held by children in widely disparate areas of the world. Perhaps to some the surprising outcome of this study was the similarity of both the direction and intensity of the values and attitudes reported for these children of different nationalities. The study in general, represents a highly important contribution to our understanding of 'international physical education' and may also represent a model for subsequent essays into similar comparative evaluations. Kenyon[3] has, of course, testified to the enormous help he received from colleagues in the countries concerned in his study—a fact which also emphasizes the importance of establishing strong international relationships between physical educators through international associations and conferences.

International Education: Great Britain and The U.S.A.

I wish now to indicate some ways in which 'international education' seems to be working between the U.S.A. and Great Britain. The movement that has been called "The Primary School Revolution in England" (Yeomans)[4] seems to have captivated teachers in American elementary schools and an increasing number of American visiting educators have been enthused at the practices, experiments and adventures they have witnessed in English Primary Schools. Much of what is meant by the so-called primary school revolution is contained in an exhaustive study of primary education in England published by the Central Advisory Council[5] called 'Children and Their Primary Schools' or more popularly, (after the chairman of the commission), 'The Plowden Report.' The report reveals the extent to which a free, exploratory, pragmatic and action-oriented approach to learning is now widespread. Of this new style of education, the Education Development Centre here in Cambridge, Massachusetts, reports as follows:

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[1] A. H. Ismail and J. J. Gruber, *Motor Aptitude and Intellectual Performance* (Merrill, Ohio: 1967).

[2] G. S. Kenyon, *Values Held for Physical Activity by Selected Urban Secondary School Students in Canada, Australia, England and the U.S.A.* (University of Wisconsin, 1968).

[3] Ibid.

A characteristic feature has been the degree to which each school and classroom is encouraged to develop its own way. As a result, schools and teachers tend to think of themselves as researchers and experimenters, responding to the endless challenge of doing a better job today than was done yesterday. Because the curriculum content of this approach is not narrowly specified, each school and class tend to develop its own personality, mirroring the needs and interests of the children as well as the talents and styles of the teachers. Because diversity and practical experimentation are built into the fabric of many of the schools, teachers and principals learn to think of themselves as participants in the process of improving education. The avenues between schools and the formal centres of educational research are, perhaps, more often than in this (U.S.A.) country; the distinction between development and implementation is less sharp. Some of the most productive research originates in the classrooms.

One of the aspects of present day English Primary School organization that has particularly appealed to visitors, is the so-called *Integrated Day* which is the term used to describe the way in which the total school environment is used to induce learning experiences which cut across formal disciplinary lines and attempt to give a wholesome (or integration) to the study of a problem not possible in a more 'subject' oriented approach to the curriculum. The N.A.I.S. consultant, Edward Yeomans[6] writes:

> "Classrooms within the Integrated Day are free from traditional authorities and conformities: desks in rows, the teacher at the front of the room, every child doing the same lesson, the daily schedule, the lesson plans, the textbooks and the workbooks. Instead, some children are reading while others study science or mathematics, and others are painting or writing stories or cooking or having a puppet show. The day is 'integrated' by including all of these and many more activities within its scope of time and place. Children choose, with reasonable guidance, how they wish to spend their time. They work alone or in groups. They may, and do, converse with one another. They learn to rely less upon the teacher and more upon the resources that are available in the environment and thus to become relatively independent learners."

Another American observer, Joseph Featherstone[7] accounts for the English innovations in terms of the English Teachers' relative freedom from parental and other outside pressure, the setting up of advisory centres marred by advisors

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[4] E. Yeomans, *The Wellsprings of Teaching* (Boston, Massachusetts: National Association of Independent Schools, 1969).

[5] Central Advisory Council, *Children and Their Primary Schools* (Vol. 1, H.M.S.O., London, 1967).

[6] Yeomans, *op. cit.*, 1969.

[7] J. Featherstone, "The Primary School Revolution in Britain," *The New Republic* (New York: Pitman Publishing Corporation, 1967).

(not supervisor or inspectors) who have a capacity for working with teachers in an unthreatening way, and by the way in which the English teachers have shown willingness to translate theories of developmental psychology (especially those of Piaget) into practice. The importance of the working teacher in curriculum evaluation and innovation is fully acknowledged and the national body for curriculum reform. The Schools Council, has a built-in requirement for its committees to have a majority of school teachers.

I have purposely fully relied on reports of American observers to illustrate the new exciting trends in English primary education lest I be guilty of painting too rosy a picture. It is much more usual for discontented people in Britain and elsewhere to make polemical stands on an imaginary land called America where everything is more efficient, better organized and highly democratic. My purpose is not to substitute one myth for another but merely to give some idea of developments that I understand have elicited international and particularly American interest. More specifically, I wish to give some background to an international education project which a recent edition of the Kappan[*] announced under the heading, "Importing British Reforms." The facts are that the Ford Foundation has agreed to fund several projects aimed to help American public schools adapt, for their use, those aspects of the recent English reforms which are applicable in the United States.

Movement Education

Without anything like the same financial backing, it seems to me that in the area of Physical Education, a similar kind of export-import-adaptation has been taking place across the Atlantic. All the elements of our programmes that have been transported and transmuted, none appears to be more important than those which go under the headings of Movement Education and Educational Gymnastics. I suspect that the impetus which gave rise to the recent generalized innovation in English education practices positively affected Physical Education also by creating the right environment for many teachers who had become disenamoured of formal methods and practices. There has long been a tradition in English Physical Education that some form of gymnastics should constitute a 'core' or 'base' of the curriculum aimed at developing generalized functional efficiency on which other specific abilities would be built. In the past, this base was concerned with such fundamental aspects as strength, flexibility and agility. The 'Movement' approach which is currently in vogue is more concerned with the development, through gymnastics and Dance, of body management, body awareness and body sensitivity, in functional and expressive tasks.

There is ample evidence that here in America there is a growing interest in Movement Education. The 1964 edition of Quest was given over entirely to considerations of Movement interpretations and an increasing number of articles on this topic are to be found in many of your other physical education journals. I am also aware that there have already been Anglo-American workshops and a number of teacher exchanges which have helped to spread this particular gospel. Although there is still a great deal of semantic confusion, I think it is true to say that 'Movement Education' is what goes on with children in schools and that such terms as 'The Art and Science of Movement' refer to attempts among some physical education to give a rational description of what they conceive to be the academic disciplined line of inquiry that currently goes under the name Physical Education Movement Education or, more commonly in Britain, Educational Gymnastics—does, of course, represent an approach to teaching which has a well formed philosophy and is said to be founded on a body of principles. By and large in Britain, these principles derive from the writings and teachings of Rudolf Laban[9] concerning the harmonization of the individual through movement. Laban did not himself develop a system of educational gymnastics but he made it clear that his theories and notions based on his work in art, education (especially dance), recreation and therapy were applicable to every form of human movement. Although his work ranged over many aspects of human movement including movement notation, "choreutics" (i.e. harmonic sequences of body movements in space), and his analysis of the interaction of body movement and emotional states called 'choreology,' his analysis of "effort" in terms of the four motion factors, Time, Weight, Space and Flow have been most widely applied. The *Time* factor is concerned with speed of motion; *Weight* refers to body energy and tension; *Space* has to do with the variation of direction, level, pathway and body shape while *Flow* describes the unifying control in movement. In Educational Gymnastics, the motion factors are used both as a means of analysis of the movements undertaken as a basis for the teacher in planning lessons which will give a full range of effort opportunities to the children. The aim of this kind of work is stated by Mauldon and Layson[10] to be:

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[*] *Kappan, Journal for the Promotion of Leadership in Education.* "Importing British Reforms," (Vol. L.I, No. 2, 1969).

1) To develop efficiency and a skilled use of the body in practical situations when working alone and with others, on the floor and an apparatus.
2) To stimulate an understanding and appreciation of objectives movement coupled with an ability to invent and select appropriate actions.

On the assumption that individuals have characteristic preferences in ways of moving (i.e. 'personal equations') and vary greatly in their physical abilities, educational gymnastics teachers attempt to develop children's latent movement powers in an individualistic, non-competitive and non-threatening way. By and large, the individual is free to conceive and develop his own answers to tasks set by the teacher in a way that is not normally possible in skill oriented games and sports. Morrison[11] writes, "The teaching of educational gymnastics is comparable with certain aspects of the teaching of art in that everyone is set to work in an individual way, results are only compared as interesting contrasts and everyone's efforts are studied and criticized as a contribution of the learning process."

For most British women physical educationists, movement training may best be achieved through a programme of educational gymnastics and educational dance. In this way, it is held that both the functional and the expressive aspects are catered for. "To be physically literate," says Morrison,[12] "one should be creative, imaginative and clear in expressive movement; competent and efficient in utilitarian movement and inventive, versatile and efficient in objective (sports and games) movement." The appropriate work for boys is seen by British men physical educationists in a somewhat different way. Important emphasis is still given to general athletic skill development and to fitness training but the attempt is continually being made to find a unifying and rational basis of physical education from which the various parts of the programme could be seen to have their origin and meaning. Many men have, in fact, accepted the movement approach as the core of their programme. Others have adapted the Laban[13] system to fit their own notions, picking and choosing those aspects which seemed to them educationally most sound but leaving themselves without any integrated theoretical platform. Others still have found their salvation by evolving a basic principle of movement scheme which ingeniously links Laban's[14] ideas with applied (Newtonian) dynamics of motion. Of course, there is a substantial cadre of physical educators who are not convinced about the usefulness of seeking a generalized and applicable 'basic' system for physical education and who construct their programmes on the assumption of the specificity of skills. For these, there would seem to be a great deal of empiric research support though they clearly have a restricted view of physical education if they consider only in their teaching the most effective ways of achieving specific skills. On the other hand, the Laban[15] based movement education approach lacks any substantial kind of accurate research support with particular respect to its general applicability to either real life tasks or skills acquisition. This vexed question of the transferability of body awareness via effort training to other skill situations is one that has never been satisfactorily answered. Tradition dies hard, statements of assumption still abound, and even eminent teacher/scholars allow themselves such liberties as the following: "It is impossible to claim a complete transference of training from one practical situation to another but it is likely that the skilled (educational) gymnast is in a position to profit by his gymnastic experience in related activities such as diving, skiing, and rock-climbing."

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[9] R. Laban and F. C. Lawrence, *Effort* (London: MacDonald and Evans, 1947).

[10] E. Mauldon and J. Layson, *Teaching Gymnastics* (London: MacDonald and Evans, 1965).

[11] R. Morrison, *A Movement Approach to Educational Gymnastics* (Dent: London, 1969).

[12] *Ibid.*

[13] Laban and Lawrence, *op. cit.*, 1947.

[14] *Ibid.*

In our British Primary Schools where the opinions and philosophies of experts is seldom taken to be the final word on a subject, one can find men and women general teachers pragmatically experimenting with many types of movement training and educational gymnastics. Educational prudence and the individual's interest, abilities, and aptitudes are apparently more important than adherence to any prescribed system. The best of whatever we have for export in physical education may, perhaps, be witnessed in these schools in the absence of specialist teachers, full-equipped gymnasia and expensive apparatus.

A recent development in England sets up what to me looks to be an excellent opportunity for a further Anglo-American 'international physical education' project. The Schools Council in London has just announced a Curriculum Research Project in Physical Education. The initial intention is to mount a large fact finding investigation of current curriculum practices in Britain and to investigate involvement motivation and attitudes of school children and their teachers. Being aware of similar curricular projects taking place here at the moment, I think the possibility of working together is too good to miss.

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[15] *Ibid.*

INTERCOLLEGIATE ATHLETICS

The Incredibility Gap in Co-Existence of Physical Education and Athletics

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When invited to participate in a discussion of the relationship of athletics to physical education, and to take a point of view in favor of the separation of physical education and athletics at the college level, I accepted with considerable concern and trepidation. Generally, speaking favorably toward the split of intercollegiate athletics from the physical education program has been rather unpopular. Over the years I have heard a number of fine presentations in favor of keeping physical education and athletics together, but I have never heard a strong paper concerning the possible split.

Several years ago in a presentation before this body, Marsh Ryman, Director of Athletics at the University of Minnesota, presented a paper which strongly recommended a relationship of need between physical education and athletics at the University level.

The trend the country over tends to indicate a movement toward a split of physical education from intercollegiate athletics. This trend, of course, is more marked in the large colleges and universities, however, it is not uncommon to find the move taking place in many of the smaller institutions.

To avoid misunderstanding and the possibility that some of the comments I will be making may be taken out of context, I should like to point out that I am firmly convinced that sports, games, athletics, and competition should be a part of physical education programs; however, in the setting from which I will endeavor to develop a number of points, it appears that physical education and athletics on an intercollegiate level are not highly compatible.

Dr. Hartman has very well pointed up a considerable number of the problems and has raised a good many questions. I should like, in this presentation, to endeavor to point out some of the problems existing in a large institution and in a situation where I do not feel the problem is altogether unique.

From a traditional point of view and philosophically speaking, athletics has been and should be part of physical education. I need not point out that the famous triangle developed in the Heatherington, and later, Williams era showed physical education as the base, with intramural sports in the middle, and then on top of the pinnacle, the athletic program for the highly qualified to have an opportunity to participate in a variety of activities. I should like to see such a diagram continued in actuality.

The present day purposes of intercollegiate athletics, and again I must qualify this, intercollegiate athletics in some of the sports activities at some institutions no longer has the same purposes as those of physical education or of the college or university general education program.

The primary purpose of college physical education is to assist the young adult to deal with life, with himself, and to provide him with a means for thoughtful administration of his own life. College physical education should assist the young adult with the accretion of social, creative, and recreational skills, along with improved physical development. The function is primarily an educative function; a function which is essential to the development of the so-called well rounded or educated individual.

Certainly, this is not the purpose of intercollegiate athletics. The purpose of football, at least in our institution, is to provide entertainment, gate receipts, and championships. Whatever education takes place, and I am sure a great deal does, comes a long way down the list from the primary purposes. Physical education is concerned with all of the students, the intelligent, the average, the below-average, the blind, the palsied, the obese, the physically handicapped, the emotionally disturbed, and others with special problems; while intercollegiate athletics for the most part is interested only in the physically gifted, and in the top spectator sports, the recruited, the paid, and the double standard student who has been selected not on the basis of scholarship, but on the basis of ability to perform through his gifted physical qualifications.

As one examines the structure of the larger colleges and universities, one finds a general trend to place intercollegiate athletics, intramural sports, and recreation under a Dean or Vice President for Student Affairs, and justifiably so. Where physical education and athletics are together as a unit, this generally means that physical education likewise ends up in the same kind of a pattern. A number of years ago, when physical education and athletics were in one department of The Ohio State University, the Vice President for Academic Affairs raised this question in talking to several physical educators, "When are you men who believe that physical education is part of the educational program, going to move out of the shadow of the stadium and into the academic stream of the University?" We found that the Director of Athletics was not on the Council of Deans, he was not in the main stream of the University from the standpoint of administration, nor was he in the main stream when it came to budgets for instructional purposes; and because physical education is considered part of the instructional program of the University, it must contend for its funds in the same way as other colleges or divisions of the university.

In terms of administration, it appears that those functions of the University or colleges which are academic in nature traditionally fall under a Dean or Vice President for Academic Affairs. In large universities, intercollegiate athletics does not ordinarily fall under a Dean of Academic Affairs or a particular college dean. In fact, in many universities, the intercollegiate athletic program is governed by an athletic board. This athletic board crosses all college lines and for the most part controls the athletic program. In this process, physical educators attached to athletics thereby do not have control of their own programs; however, athletic coaches in physical education programs do have a voice in the functions of the physical education programs; they are regular voting members of a physical education staff, and as such, have something to say about programs; while, as I said before, physical educators would have nothing to say about the athletic programs.

In academic circles, it is not customary to have an advisory board or a campus wide board which is directory in nature pointing out what the educational functions or instructional functions of a particular department or division should be.

When one looks at the financial aspects, one cannot help but notice that the Director of Athletics has a considerable amount of responsibility, a considerable budgetary outlay; for example, at The Ohio State University, the Athletic income for the fiscal year 1968-69 was $3,743,000, while the expenditures over the same period were $3,470,000. During the current year, the Athletic budget is $3,320,000, and it is predicted that the expenditures will be over $3,500,000. In all fairness, this kind of a budget requires the full time work of the Athletic

Director, and consequently, he does not have time to consider the problems of physical education.

While discussing finances, I think it should also be pointed out that the intercollegiate budget of well over $3,300,000, involved not more than one thousand students. On our campus this is less than 4% of the male student body. The budget for physical education, which through its various programs involved more than twelve times as many students, or over twelve thousand students, has approximately one-third of the amount devoted to intercollegiate athletics. Though I do not really know, I would judge that a college or university's success in terms of victories in their sports programs, can be quite well measured by the amount of expenditure devoted to that program. That, of course, does not mean that other factors such as academic stature in terms of the recruitment of athletes, might not also have some relationship to the number of victories or the team's standing. Staff morale is not improved where salaries of staff members are not comparable; where equipment, facilities, teaching materials, teaching aids, and all the necessary functions involved in the process, are on somewhat of a double standard. It is quite evident that a double standard does exist. I know of institutions where the total physical education staff, which may be two times the size of the intercollegiate staff, will have no greater salary budget than the intercollegiate staff. The operating expenses of a total physical education department, when compared to the operating expenses of the intercollegiate division or the athletic department, may be such that the latter has a budget twenty to thirty times as great.

Another area in which the inequalities have been great, has been that of facilities. In most of our large universities, the finest facilities are reserved for the athletic teams and are reserved during the prime time of the school day when intramurals, recreation, and even classes need the spaces. Not only are these facilities the finest facilities, but are the best maintained, and frequently not ever available to physical education or recreation.

Personnel policies differ between the regular university staff and the intercollegiate athletic staff. While each has his own definite responsibilities, intercollegiate athletics personnel live pretty much by a set of standards involved in the recruiting of athletes, the control of athletes, and a system of checks and balances dictated pretty much by conference standings or victories. They seldom attend staff meetings of their physical education departments or their universities, or colleges, and they have a great many assistants, usually unlimited travel and expense accounts while on travel, and this does raise many questions with other faculty members who are plagued with little or no travel money, little or no teaching assistants, little or no equipment, and forced to work with students on a different level due to the fact that they are not selected, not given grants, not motivated by the publicity and other advantages coming from participation in the athletic program.

Under no circumstances should one leave the impression that those involved in the administration of the intercollegiate athletic program and the coaching of the various sports are anything but highly competent and are carrying out the responsibilities for which they are employed in most colleges and universities.

To summarize, I should like to endeavor to briefly review the points I have been endeavoring to make. In a large and comprehensive university or multiversity, and in the usual university conference such as the Big Ten, the credibility gap, or maybe I should say incredibility gap, between physical education and intercollegiate athletics, makes co-existence practically an impossibility. Again, I should point out that this is true primarily when the intercollegiate athletics discussed includes football, basketball, baseball, possibly track, and depending upon the institution, some of the other sports where considerable emphasis is placed. In administration, there appears to be a trend toward the placement of intercollegiate athletics under the Vice President or Dean for Student Affairs. Because physical education, with its basic instruction program, its teacher preparation program, its research program, and its preparation of professional personnel, tends to be academic in nature, it is moved into a college under a dean. To administer a co-existent program under the above circumstances, becomes almost an impossibility. The person in charge frequently has to wear several different hats, and on some campuses these hats are for intercollegiate athletics, with a Vice President for Student Affairs or a Dean; a hat for the academic endeavors under a college of education or a liberal arts college; or a hat under University Relations related to university publicity; or a hat under the university Vice President for Development related to alumni affairs.

In terms of philosophy and purpose, the physical education program is primarily interested in providing an important qualitative addition to the life of an educated person, and this involves all students in the university; while the intercollegiate athletic program seems to have as its major purpose winning, gate receipts, public relations, and entertainment.

The governance of intercollegiate athletics is usually under a faculty representative and an athletic board. This eliminates an opportunity for the democratic process of faculty control which usually exists in other departments on campus. Physical education people serving in athletic departments have little or nothing to say about the control of intercollegiate athletics; while athletic coaches serving in physical education departments do have a voice in physical education programs that touch the total student body.

In terms of financial consideration, intercollegiate athletics have expenditures which lead to double standards in terms of working with young people. When it comes to teaching aids, teaching equipment, such as audio-visual equipment, teaching stations, and other teaching spaces, materials or instruction, etc., the physical educator ends up as second-class citizen, when compared to the intercollegiate staff. This certainly does not help morale. Teaching loads frequently vary also in favor of the intercollegiate staff; in fact, many a football and basketball staff have no academic or class assignments whatsoever in the university.

Generally, the academic and professional qualifications for coaching are such that rank, title, and tenure as well as salary do not fit the general college or university pattern. This gives rise to impossible situations when the coach no longer chooses to or is asked to relinquish his coaching responsibilities. What does he do in physical education? Can he be absorbed, and not at the expense of the professional programs and research?

In terms of facilities, one cannot help but observe that the best facilities at the prime time of day are often reserved for that small percent of students, who in terms of needs, probably need them least.

Again, let me say, that under the circumstances which I have indicated above, physical education and athletics are no longer compatibly wed. Though I firmly believe that athletic should be a part of physical education, and that in those institutions where the physical education department actually has control of the athletic program, such a situation should prevail. In many of our major universities, the university does not control the athletic program; it only provides a home for it and conducts a spectator program which gives publicity, enhances the entertainment of the public, and serves some sort of sociological phenomenon and alumni relations.

An Inquiry into the Co-Existence of Physical Education and Athletics

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A prominent "big time" coach inquired recently, "Why do you people in physical education dislike us?" The discussion that followed was concerned with the actions of a well known physical education department. The coach seemed sincere in his comments but was confused as to why people in physical education would or should abuse his department and his personal efforts. A physical educator who had coaching experience remarked, "I'm getting fed up. I have a tough time getting travel money in physical education which is my main concern, but the athletic department supports me one hundred percent in any travel expenses I may need in relation to my coaching." Another coach indicated he resented men in physical education research laboratories delving into athletics and suggesting what he should or should not do. A physical education man commented upon how coaches used their players for self glory and that educational objectives seemed foreign to coaches' minds. The comments go on and on and the conflicts between the two departments continue to mount.

Many of the conflicts stem from the beginning of time as man continually seeks power over his adversary. Other problems are more immediate and forthcoming, situations caused by our changing times. We are in an age that is asking for more freedom and expression in what takes place, thus a tendency to break up traditional organizational schemes. Through the years many college physical education and athletic departments developed independently. Athletics grew out of student activities and control was placed in the hands of faculty members other than physical educators. Other athletic programs were developed with physical education being a sub-division along with related areas such as intramural activities and still other programs saw athletics fall under the heading of physical education. In theory many of these early organizational plans may have been sound, but now they are the cause of many conflicts. These conflicts usually revolve around administration, finances, philosophical purposes, facilities and personalities.

Conflicts in the administration of our programs are numerous. Men who are chairmen of departments that include both physical education and athletics have a great many headaches in trying to balance the program. In small colleges a chairman of physical education sometimes doubles as the athletic director or vice versa. Physical education perhaps should demand as much if not more attention than athletics, especially if the college has a program for students majoring in physical education, but due to the nature of athletics, physical education many times takes a subordinate position. Coaching, scheduling, hiring of officials, conventions, counseling with coaches and athletes, and great quantities of correspondence may detract greatly from his overall function. If the chairman is a dedicated person this may be a source of immense frustration, a conflict within himself as well as his department. His staff may be lined up half on one side and half on the other and pleasing everyone is difficult and sometimes impossible.

Unfortunately when the director of athletics is also director of the physical education program, greater conflicts caused by the suppression of physical education are sometimes encountered. Problems of administration are still to be found in institutions where there are separate chairmen or directors. The struggle for power is an ugly one and in some cases the two department heads may openly battle for leadership which is a detriment to the physical education-athletics image.

In today's society, finances have become a thorn to everyone. For years physical educators have entertained some jealousy due to their lack of funds and the apparent athletic department's abundance. Now many athletic departments are trying desperately to get the educational dollar from the college to help finance their program. Athletics have been digging their own grave for some time. By insisting they have to go first class, by paying exorbitant funds for scholarships and recruiting, by traveling all over the country instead of playing contests close to home, by letting officiating become a business rather than an avocation, and by building huge stadiums and arenas that have increased their debt, athletics have almost buried themselves. On the other side of the ledger they have provided excellent facilities for studying and viewing excellence in performance, they have provided a means of education for some individuals in need, they have established inter-institutional ties, they have developed and provided safe equipment, they have insured and looked after the health of their players, and in some ways they have been more professional, if you will pardon the pun, than the physical educator. Most of their gains have been made possible with money obtained in places other than tuition. Gate receipts, television, and student activity fees are some of the athletic department's financial sources not available to the physical education department. Many times due to the disposition of financial resources the athletic department can build new facilities, hire staff at higher salaries, offer special athletic privileges, and pay travel expenses which the physical education department cannot. This type of situation usually does not foster good relationships.

Conflicting philosophical concepts are common in our business. On the other hand many objectives of physical education and athletics are the same, especially in the small institution where it is more feasible to operate as one department. Differences on a few key philosophical points create the major divisions. The objectives centered around such elements as winning, all star teams, and entertainment which are found in most of our athletic programs tend to conflict with the total fitness and educational objectives of physical education as seen through the eyes of some educators. This is unfortunate because the vast majority of institutions are not involved in the so called "big time" athletic programs. Institutions that support athletics on a large scale such as football, basketball, and baseball, and sometimes one or two others usually support many other activities on a smaller scale that have entirely different objectives. Some athletic directors would like to see sports such as soccer, gymnastics and lacrosse fall under the domain of physical education. Directors of athletics could then concentrate on a few sports (the ones that make money and give prestige), and the objectives, although perhaps tainted by selfish departmental gains, would be cut and dried.

Facilities are the source of many problems. All people in physical education or athletics have experienced at one time or another the hallowed ground syndrome, or stay off the football field. Facilities if split including separate maintenance and finances with no overlap of any type will still cause problems. Physical education people will wonder why they cannot utilize land and buildings which most of the time are dark and silent. When facilities are jointly used it is a question of who gets what when. Athletics utilize almost everything in the late afternoon. Most physical education classes are over by then so sharing seems to work out satisfactorily. But what if the physical education classes or intramurals use a varsity field in the early spring when the ground is still wet, or in dry weather they wear the grass surface down to dust, or they damage a piece of equipment used by the athletic teams? Then the conflicts start to appear and it seems to become a malignant growth disrupting the entire program.

Conflicting personalities have ruined some of our departments. Most educators have dominant personalities. Due to the nature of their profession they are used to speaking out and defending their programs. Many times conflicts break out because of vocal comments and accusations stated by one department in reference to another. Educational philosophy, alumni relations, tradition, school spirit, academic disciplines, logical reasoning, and sentiment constitute part of the ammunition as one orator challenges another. The overt butting of heads between two strong department leaders can ruin one or both programs.

Subterfuge in a department can be an even greater enemy. Certain personalities will not speak out, but will spread a continued feeling of disenchantment throughout the grapevine. Truths are thus hidden and imagination runs wild, as a result some departments dislike each other and really do not know why. Worse yet they make no attempt to get together.

The list of conflicts is endless and peculiar to each and every department. Obviously all situations will not be the same and many factors must be taken into account. It must be realized that size and type of institution, the nature of the physical education program, and the status of athletics are all important in determining the magnitude of the conflict. Most of the conflicts seem to come from colleges and universities that have a program for students majoring in physical education. These are usually the professionally minded educators who care about the direction of physical education. They are conscientious hard working people who are willing to stand up and be heard. They will defend physical education. The question is, will they defend athletics? At the small liberal arts college or in institutions where there is no program for students majoring in physical education the voice of opinion is not as strong. In most cases the programs in colleges where there is no major program the top administrator is the director of athletics and his staff, the coaches, teach the basic activity courses. Once again we have a conflict because many physical educators feel coaches are not going to represent their profession adequately. The coaches' background which may not be physical education causes some dissent. Other criticism exists since it is believed coaches have areas of interest apart from basic instruction and thus do not give themselves entirely to class type teaching.

What is needed is an understanding of each others' programs and some major reforms. Communication seems to be a problem here as it is in most of the world today. Where do we start? Most of us in physical education and athletics know the values inherent in a well administered and well taught program. But for some reason we tend to lump athletics into one category which is not academic in nature. We must surely realize that the coach has a great personal influence on the student's life through extensive day by day contacts, and that athletics should represent the epitome of physical education in terms of performance. Moreover that in the recent disturbances on our campuses athletics proved to be one of the most stable groups. Further, we should recognize the values of competition, and, to quote some well worn cliches, the associated learnings that come from such things as working together, discipline, and living with defeat as well as victory. How can we turn our backs on athletics? How can departments fight to split rather than fight to develop a meaningful program for our young people? Athletics should not be our prime or sole concern, since only a small percentage of our students reach that level but nevertheless, we should be concerned and athletics should demand a fair share of our attention.

This past summer at the National Association of Collegiate Directors of Athletics Convention in Kansas City, one of the program topics was "College-Professional Athletics—Can They Co-Exist?" Perhaps the topic and our concern should be, can physical education and athletics co-exist? Are we so far apart in some areas that we will never come together even if eventually it is the most desirable course of action for both parties?

For the sake of discussion let us assume that athletics should fall under the heading of physical education. That in their way athletics are as important to the profession as our programs for the handicapped, the slow learner, and the physically retarded at the other end of the scale. Just because some aspects of athletics have gone beyond the educational objectives of our basic program does not mean they should be left there. Was not the original purpose of athletics one of providing a high level of experience for those students who had gone beyond the challenge of the local institution? The original thought was not recruitment, athletic scholarships, entertainment, and separate departments, but one of participation. Would it not be best for all if we could come together with common objectives and pool our resources to teach and coach once again for learning sake? A coach recently made the remark when confronted with the possibility of this approach, "Sure, I'm for it, but not if the others aren't." He did not feel it was fair to him or his players to be placed against such odds. Whether he was right or wrong, this will be a common argument. If changes are to be made, they must be sweeping changes mandated by national organizations and conferences.

Both physical education and athletics must work together to achieve an objective of this type. It would seem that athletics have to make the largest adjustment. Scholarships need to be taken out of the hands of the athletic department and placed in the hands of the college, eligibility rules need to be scrutinized, recruitment needs to be limited to where the selling point is based only on the academic advantages of the institution, facilities need to be shared, conferences need to be rearranged, officials' fees need to be examined, monies need to be channeled through the college business office, and coaches need to re-examine their objectives.

The institution and physical education must contribute their fair share. Sufficent funds need to be routed into athletics so that a proper and meaningful program can be maintained. Physical education needs to recognize the values in an athletic program and avoid condemnation of athletic practices. Many physical educators can learn a great deal about teaching and technique from the coaching profession.

There are a variety of compromises available but few will ever be recognized or worked out. Most university athletic departments probably will not even listen to proposals of this type. Not only does it threaten the domain of the coach, which is one of pride, but debts, alumni pressure, and administrative structure are giant obstacles to overcome. Eventually athletic departments may be forced in this direction. In the meantime, there are many colleges and universities that could revise their programs and come close to these suggestions.

Accordingly we must face the possibility of the situation which confronts physical education and athletics today. Perhaps complete or partial separation of the departments will best meet the needs of all concerned. A young student in physical education when asked to reflect an opinion on this problem stated, "Deep inside there exists always that incomprehensible, that intangible element that unites and forms the basic philsophy of physical education and athletics." Does this element exist? What should be the moral obligation of our profession? In the years ahead what is the most feasible plan? Should athletics go their separate way or can physical education and athletics co-exist? Whatever your answer where do we start?

HISTORY OF SPORT

Historical Relationships Between the Concepts of Sport and Physical Education

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How often has not each of us been asked the question: "What do you do or what is your work?" When we reply that we are physical educators, a follow-up question is usually posed: "What is your sport or what do you coach?" Sport and physical education are two widely used and, yet, grossly misunderstood concepts. There is obviously some kind of relationship between the two, but one can never be certain as to exactly what are the ties. The reason for this uncertainty should be readily apparent. We don't really understand either concept. So, how can we hope to determine much in the way of connection between sport and physical education?

This we do know. Sport is a very widely accepted concept. At least, programs and activities associated with the idea of sport have gained considerable approval in terms of participation and other forms of support. The skeptic on this point is referred to the *Time Essay* of June 2, 1967. Data presented there leads one to believe that we are indeed living in "The Golden Age of Sport."

Physical education has also gained a degree of acceptance. It has been customary during the twentieth century to speak of programs in sport, dance, and other forms of physical activity in the schools as being physical education. Thus, physical education has emerged as a kind of umbrella term in the educational setting.

One could, of course, take the position of: who cares? Is it necessary to explore the relationships between what we call sport and physical education? Those who assume such a position seem to feel that the whole issue is largely one of semantics. Would that it were that simple! Whether we like it or not, even if we wish to ignore it, there are programs and activities which fall under the varying labels of sport and physical education. Furthermore, even those who are most intimately involved seem to be confused and bewildered by these concepts as they relate to purposes which they wish to achieve. Perhaps some of the confusion can be eliminated by looking at the historical relationships between sport and physical education.

Of the two, sport appears to be the older concept, although it too may not be as antiquated as some people would believe. In the western world, educators, generally, and physical educators, more specifically, are inclined to cite the ancient Greeks as the ultimate source of theoretical support for contemporary programs. Physical educators particularly identify Plato as the fountainhead of their theory. It is true that Plato freely discussed what he called "gymnastics."

However, one must proceed with caution in extending Plato's conception of gymnastics to "modern" ideas regarding physical education.

As a case in point, Paul Weiss states that the Greek philosophers, as a group, more or less ignored the subject of sport:

> We will find in the Greeks some good historically grounded explanations for the neglect of sport by philosophic minds, then and later. Despite their evident enjoyment of athletics, and their delight in speculating on the meaning of a hundred different human concerns, the Greek thinkers never dealt extensively with the nature, import, and reason for sport. Since Plato and his fellows formulated most of the issues that have occupied philosophers over the centuries, the Greek failure to provide a philosophical study became a norm for the rest.[1]

If the Greeks did not provide philosophic support for sport as a concept, the question is this: when and where did sport emerge as a theoretical construct? One can go back at least as far as 1900 and find a thoughtful discussion of sport. An Englishman, H. Graves,[2] philosophically analyzed the concept of sport. Sport, as a term, is an abbreviated form of an old noun and verb, disport. The latter was derived from the medieval word disportare, which meant to move from one place to another or to divert or distract. Thus, sport, in its inception, conveyed the meaning of diverting oneself, that is engaging in amusement or recreation. This thought is reinforced by James Keating's work in which he contrasts sport with athletics.[3]

Graves continued by noting that dictionary definitions of sport will only reveal the contradictory senses in which the term is used. These definitions run the gamut from the idea of amusement to pursuits of killing (field sports) to games in which stakes of money are involved. He suggested that the dictionary meanings should be tested through comparison with usages of the concept in activities and programs. Such a test would reveal that physical recreation seems to be essential to the notion of sport. Competition is another likely ingredient in sport, although Graves noted the difficulties which ensue when competition is considered within the framework of sport. Competition frequently leads to various forms of money making which cause sport to lose its important characteristic of being recreative. In summary, one could say that Graves analyzed those ambiguities regarding the notion of sport which continue to provide the focus for present-day theorists on the subject.

By comparison, the concept of physical education is of even more recent origin than sport. Of course, one could take the position that the Greeks were actually talking about that which we call physical education today. However, we as will note later, the historical record does not really indicate this to be true.

We will begin with the broad generalization and assumption that physical education is really a twentieth century concept. The skeptic on this point will immediately jump to the foreground and suggest several documented instances wherein the term physical education appeared in the literature and programs prior to 1900. This we will acknowledge and accord. The following might be cited as cases in point. Benjamin Rush used the term as early as 1772 in an article entitled "Sermons to Gentlemen Upon Temperance and Exercise." In 1790, Noah

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[1] Paul Weiss, *Sport: A Philosophic Inquiry* (Carbondale: Southern Illinois University Press, 1969), p. 5.

[2] H. Graves, "A Philosophy of Sport," *The Contemporary Review*, 78 (Dec., 1900), 877-893.

[3] James W. Keating, "Sportsmanship as a Moral Category," Ethics, Vol. LXXV, No. 1, (Oct., 1964), pp. 25-35.

Webster referred to physical education in his "Address to Yung Gentlemen." Heinrich Pestalozzi wrote an article in 1807 which, in translation, is entitled "Concerning Physical Education." A book with the title *The Importance of Physical Education* was published by J. C. Warren in 1831. Another book, by A. L. Pierson in 1840, was entitled *On Physical Education*. Among the more familiar names in the history of physical education, Edward Hitchcock, in 1881, wrote "A Report of Twenty Years Experience in the Department of Physical Education and Hygiene in Amherst College to the Board of Trustees."

Other references could also be cited. But the aforementioned should suffice to establish the fact that the term physical education was at least coined prior to the twentieth century. Now to coin a term or even to use it repeatedly is one thing; to have a term develop into a concept is something else. A concept is an abstract notion or idea which combines elements into the construct of one object. In other words, a concept is not something which arises spontaneously and without thought; a concept is a configuration which defies precise definition.

Physical education actually emerged as a concept somewhere around the turn of this century with the advent of the so-called "new" physical education. The concept developed from a merger of programs in physical training, gymnastics, sport, and athletics. Proponents of the concept were quick to recognize that changes which were taking place in American education generally opened the door for the inclusion of physical education as part of the school curriculum; thus, the education part of the term physical education took on a new significance.

It has been customary to identify the "new" physical education with the slogan "education through the physical." Nobody seemed to know exactly what that meant, other than it being a reaction to the more restricted idea of "education of the physical." The latter concept, of course, was largely associated with the earlier programs of physical training and gymnastics. The inclusion of sport under the umbrella of physical education added a new dimension. Somehow or another sport did not seem to be quite as physical as gymnastics or physical training, even though it has been suggested in more recent years that physical prowess is the one characteristic that distinguishes games in general from sport in particular as a game occurrence.[4]

Sport also seemed to broaden the scope of physical education by offering new avenues for social experimentation. The element of competition was readily recognized as another important characteristic of sport; this, in turn, provided the stimulus for many of the fantastic claims which were derived from the concept of "education through the physical." Jesse Feiring Williams symbolized these lofty assumptions with his classic statement:

> Education through the physical will be judged, therefore, even as education for life will be judged—by the contribution it makes to fine living. The ability to punt 60 yards is on a par with some of the esoteric emphases in general education. It should therefore be declared that physical education seeks to further the purposes of modern education when it stands for the finest kind of living.[5]

Therefore, we find that sport emerged or was submerged in the concept of physical education early in this century through the paradoxical attempt to make physical education more educational. One might suspect that the change occurred only at the abstract level of theory, but the facts indicate that the content of programs and activities was also affected. Hackensmith[6] notes the changes which took place during the first quarter of the century. From 1900 to 1917 gymnastics continued to dominate physical education programs in the public schools. During the same period interscholastic athletics flourished at the high school level as a program which was distinct from physical education. In 1922, Williams stated that athletics should be conducted as an educational project, "not as a side show, extracurricular affair, or student amusement activity." Surveys conducted in the 1920's revealed that sports were occupying more time in physical education class periods and that efforts had been made in many places to administratively combine athletics with physical education. Thus, the theory of Hetherington, Williams, Wood, Cassidy, and others did not merely remain on the shelf; actual changes took place even though, as is customary, there were noticeable gaps between the theory and practice.

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[4] John W. Loy, "The Nature of Sport: A Definitional Effort," *Quest*, X (May, 1968), p. 6.

[5] Jesse Feiring Williams, "Education Through the Physical," *The Journal of Higher Education*, Vol. I (May, 1930), p. 281.

Some people went so far as to suggest that sport was actually the essence of physical education and that physical education should be renamed accordingly. The most vocal spokesman of this position for the college level was Seward Staley. In 1931 he set forth a classic statement of his position.[7]

Needless to say, Staley's ideas on this subject did not exactly fall on fertile ground. On this point, Staley was kind of a lone voice in the wilderness. The concept of sports education never really took hold. Professional physical educators continued to view sport as one part of the concept of physical education. Likewise, programs in physical education were generally organized and conducted to reflect the idea that there is more to physical education than sport.

Paradoxically, while sport was submerged within the concept of physical education, sport has flourished both within and without the schools in a way which would be the envy of any educator, let alone a physical educator. This generalization is so obvious that it scarcely needs elaboration, but we will cite a few points of documentation in an effort to reinforce our major hypothesis. To begin with, we concur with the Keating thesis that sport should not be confused with athletics. We prefer to consider athletics as an extension of sport. The rapid increase in popularity of athletics, especially in the United States, is readily apparent. But that which we call "sport" has also flourished in many ways. The number of people who ski, bowl, swim, play golf, tennis, badminton, handball, and other sports has been steadily increasing. There are many reasons for this such as increased leisure time and more available money, but this is aside from the point that sport has attracted more and more participants regardless of the reasons behind such participation.

This noticeable acceleration in sports participation has also been reflected in school programs. Since its organized beginning in 1914, intramural sport has witnessed a marked growth in many ways. There are more participants, more facilities, more activities, and better organized programs than ever before. Surveys reveal that intramural sport has prospered most at the college or university level, but in some places junior high and high school programs have also flourished. Where good programs have been found, they may usually be attributed to the enthusiasm and ability of one or more individuals who have worked in and promulgated intramural sport as their specialized area.

Theoretically, twentieth century physical educators have generally espoused the idea that both athletics and intramural sport are part of the concept of physical education. For many years now, undergraduate major students have been sufficiently brainwashed to accept the following triangle as a panacea for all organizational structure problems within the field:

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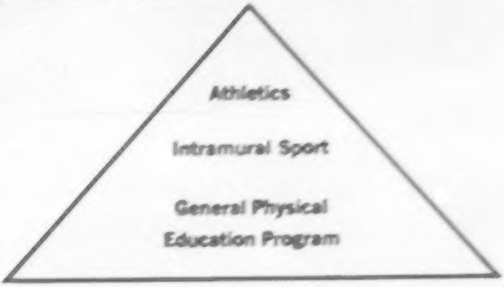
[6] C. W. Hackensmith, *History of Physical Education* (New York: Harper & Row Publishers, 1966), pp. 379-434.

[7] S. C. Staley, "The Four Year Curriculum in Physical (Sports) Education," *Research Quarterly*, II, No. 1 (March, 1931), pp. 76-90.



The base of this triangle is also referred to by other names such as the basic instruction, required, or service program in physical education. Regardless of the specific name, this has generally been considered the physical education, as contrasted with athletics and intramural sport. In other words, physical educators have been inclined to accept the triangle on the one hand and reject it on the other.

We cannot help but reflect on an event in recent history which dramatically revealed the dispersed thinking which pervades when the idea of the triangle is challenged. At the 64th Annual CPEA Meeting held in Washington, D.C. in 1960, Donald Mallett, Executive Dean of Purdue University, delivered a provocative speech on the subject of intramural sport.[8] Essentially, Mallett took the point of view that the service or basic instruction program as such was about to be replaced on American college campuses. Although he expressed a strong belief in the importance of physical activity, he did not deplore the trend which he observed. Instead, he suggested that an expanded intramural sport program could more than fill the gap. He depicted a sport program which would encompass instruction, competition, and relatively unorganized activity, such as commonly called "free play." Mallett further suggested that physical educators should stress the instructional phase of physical education at the elementary school level. Aside from the consideration of athletics, which Mallett considered to be a peripheral program in the sense of the meaning of physical education, he actually came the closest to supporting the blend represented by two parts of the physical education triangle.

There is an interesting paradox here. Mallett's remarks were interpreted by many of those in attendance as being hostile to the cause of physical education. Yet, from another standpoint he offered a framework within which sport and physical education might actually achieve the kind of union that had been envisioned for 50 years. More recently, Thomas Sheehan also saw sport as the focus of physical education, but from a somewhat different frame of reference: "What is there within the total physical education environment which is not the proper concentration of some other area of study? Is there a phenomenon currently within our interest which may be afforded identification as a social institution? There is. This phenomenon is sport."[9]

Sheehan, of course, was considering sport from the standpoint of an area of study as well as a program of activities, but he would appear to share one thing in common with Mallett: both would attempt to elevate sport from its submersion within the concept of physical education.

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[8] Donald Mallett, "An Educator Views the Contribution of Campus Intramural Sports Programs," Proceedings, 64th Annual Meeting, College Physical Education Association, 1960, pp. 95-96.

[9] T. J. Sheehan, "Sport: The Focal Point of Physical Education," Quest, X, (May, 1968), p. 65.

Thus, as a concept, sport has had an unusual history. It arouse outside the context of physical training, as a more or less parallel concept. It was incorporated within the concept of physical education early in this century. Meanwhile, sport continued to flourish outside the context of physical education, while being somewhat submerged within. Physical education has struggled for existence; sport has emerged to a point where it is one of the significant institutions in this culture. Certain physical educators are now questioning the concept which identifies their work. What will the future bring? Will sport eventually replace the concept of physical education?

Points of Speculation

This analysis of the historical relationships between the concepts of sport and physical education leaves us with at least two major points of speculation which extend beyond the facts.

First of all, it appears that the concept of physical education arose out of a pragmatic need, and the concept may very well have fulfilled its purpose. We are not knocking the efforts of Williams, Hetherington, Wood, Cassidy, et al. They were opportunists in the best meaning of that term. In recognizing the weaknesses and limitations associated with the concept of physical training, they seized the opportunity to bring their work under the educational banner. The door was opened for this sort of transition when Dewey and his disciples set forth their "progressivistic" ideas which widened the scope of education.

In recent years, the term physical education has fallen into disfavor among certain scholars within the field for several reasons. Zeigler has summarized these reasons in a humorous, clever, and yet truthful manner.[10] There is no doubt that part of this skepticism in "hanging your hat" on the concept of physical education stems from the attack which has been made on graduate study in the field as being non-academic. To be non-academic is akin to being unholy. James Conant lit the fuse which triggered an interesting chain reaction.

Since 1964 there has been a wild and scrambling search to identfiy the disciplinary nature of our field. Human movement has emerged as the favorite concept because it represents another umbrella, even though it is woefully deficient in concreteness. That brings us to point of speculation number two.

Physical education should not and will not be replaced by the concept of human movement. There has been a tendency to contrast the profession of physical education with the discipline of human movement. The net result is a comparison of one abstract entity with another. Both abstractions have arisen from the search for appropriate umbrellas. In this search, concrete components have been overlooked. These components are sport and exercise. Interestingly enough, many of the organizational problems in relating the discipline to the profession could also be eliminated. Sport and exercise would provide the focus for both the profession and the discipline. For those who are interested in organizational charts, our work would be represented by parallel, three-tiered structures:

Exercise Science	Theory of Sport
Understanding and Communication of Exercise Science	Understanding and Communication of Sport Theory
Conduct of Exercise Programs	Conduct of Sport Programs

I suppose it's possible that these three-tiered structures could be collapsed to two tiers by eliminating the middle men. Under such conditions it would be assumed that exercise scientists and sport theorists are willing and able to communicate their ideas in such a way that they may be understood by those who conduct exercise and/or sport programs. From what we have observed to date, it would appear that the middle tier is desirable.

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[10] E. F. Zeigler and H. J. VanderZwaag, *Physical Education: Progressivism or Essentialism?* (Champaign, Ill.: Stipes Publishing Co., 1968), pp. 9-11.

There may be those who are willing to generally accept the above propositions, but who are concerned about the trivial matter of finding a succinct, umbrella name for the department or school which houses these two parallel programs. For those who are so perplexed, we offer two suggestions. First of all; the department, division, school, or college could simply be called "sport," because sport does have the demonstration of physical prowess as one of its distinguishing characteristics. On the other hand, if the designation of sport seems offensive to the exercise people because of the playful connotations of sport, there is nothing wrong with a longer, although more specific, name for the umbrella: a department of sport and exercise science would certainly describe the work of most of us who are called "physical educators."

Exercise at Altitude–Historical Remarks[1]

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The first to realize that animal life depends upon the availability of oxygen were Lavoisier, Priestley, and Scheele. In 1774, Lavoisier demonstrated that air contains a "pure" and a "noxious" portion; that candles burn and mice live only in the former; and that during exercise increased amounts of oxygen—the term was introduced by Lavoisier—are required. "It is noted," stated a report on his work by the Academy of France, "that M. Lavoisier has tested all his results by measure, by calculation, and by weight, a rigorous method which is, happily for the advance of science, beginning to become indispensable."

That air could be rendered suitable to rebreathing in closed circuits, provided water and carbon dioxide were absorbed from its expiratory fraction, had been known since 1682, when Stephen Hales of England presented his "continuous breathing unit"; he showed that expired air after being passed over potassium carbonate can be inspired again.

John Hunter, the British surgeon, proposed to use oxygen for resuscitation. In experiments with dogs, he removed sternum and portions of the ribs so as to bring the lungs into direct view. He reported that following application of oxygen through trachael catheters "the colouring of the pulmonary blood changed promptly."

A portable apparatus to measure oxygen intake during exercise was devised by Theodor Schwann (1810-1882), a versatile investigator, who also described the histological structure of nerves, and the presence of pepsin in gastric juice. Schwann's "closed-circuit respirator" consisted of two cylinders, one of which contained compressed oxygen, the other an "absorption chamber" for the purification of expired air. Originally, the respirator was designed for use by rescue teams in mines. Schwann reported that an adult man consumes 25.141 liters oxygen and expires 22.593 liters carbon dioxide per hour.

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[1] A bibliography may be obtained from the author upon request.

During the last quarter of the nineteenth century, research on gaseous metabolism was stimulated by the growing interest in aviation and mountaineering. In 1875, two Frenchmen, Croce Spinelli and Sivel, died during the flight of the balloon "Zenith." The venture had been prepared in cooperation with the physiologist Paul Bert (1833-1886), who was interested in the effect of lowered atmospheric pressure on the "vital functions of animals." In 1876, Bert constructed the first low-pressure chamber for human experiments. Oxygen bags were installed in the "Zenith" and connected with a "bubbling device" for breathing the gas. However, during the fateful balloon ascent, the amount of oxygen contained in the bags proved to be insufficient, and the bubbling device did not work. The preparatory investigations in Bert's laboratory had failed to reveal the insidious nature of the onset of the symptoms of anoxia. Also, Bert overrated the toxicity of oxygen since he was unduly impressed with reports that prolonged breathing of pure oxygen under high pressure—a distinctly unphysiological situation—exerts a deleterious effect on animals. He thereupon concluded that breathing oxygen even for brief periods under normal atmospheric pressure would be harmful, thus perpetuating an error due to a statement made 50 years earlier by Alexander von Humboldt, who thought that inhalation of oxygen invariably caused damage to lungs and muscles.

In 1890, Zuntz (1867-1920) introduced the two-way valve principle to separate inspired and expired air, an important methodological advancement which facilitated measurement of ventilation and of oxygen consumption during rest and exercise. Zuntz and Geppert developed the first modern "Stoffwechselapparat," which was used in many pioneering studies on gaseous metabolism in his laboratory at the Landwirtschaftliche Hochshule in Berlin. Zuntz cooperated with such able physiologists as Loewy, Schumburg, Magnus-Levy, and Rubner. The original model of the spirometric apparatus of Kestner and Knipping, from which modern ergometry evolved, was a modification of the Stoffwechselapparat of Zuntz and Geppert. Zuntz also devised the first treadmill for metabolic analyses during work performances of horses. With Loewy, Müller, and Caspari, he undertook several Alpine mountain expeditions, the scientific results of which were summarized in 1906 in a magnificent volume "Höhenwanderungen und Bergklima." An apparatus for recording respiratory movements (pneumograph) was perfected by the Italian physiologist, Angelo Mosso (1846-1910) who, prior to the turn of the nineteenth century, built the first high altitude research laboratory on the summit of Monte Rosa, the "Capanna Regina Margherita." He wrote two classical monographs on exercise at altitude, which included accounts of his interesting concept of "acapnia."

In 1860, Etienne Jules Marey of Paris (1830-1904) developed his "pressure drum" and "sphygmograph" apparatus for mechanical transmission and recording of arterial pulses. Prior to the introduction of electrocardiography, Marey's "sphygmograph" was used extensively to investigate the effect of exercise and training on cardiac rate and cardiac force. Modern electrocardiography has in fact not fully replaced sphygmography since it does not provide information on mechanical characteristics of cardiac action. To this shortcoming, Yandell Henderson of Yale University drew attention when, in 1911, he described results obtained during a research expedition to Pike's Peak in Colorado, 12,110′ above sea level. Henderson, who was joined on this occasion by C. G. Douglas, E. C. Schneider and J. S. Haldane, obtained "recoil curves" recorded with the help of a head-pelotte which served as sensing transmitter for total body vibrations engendered by cardiac systole. The term "ballistocardiography," now used for the physiological phenomenon under reference, was introduced thirty years later by Isaac Starr, who had worked with Yandell Henderson in the early twenties.

The first *clinician* to realise the therapeutic importance of exercise at sea level and at medium altitudes was M. J. Oertel, a spa-physician in Bozen and

Meran. During the eighties and nineties of the last century, Oertel introduced a training system called "Terrain-Curen," for the treatment of "weak heart muscles, poor pulmonary circulation and obesity." He supplied his patients with maps of Meran and its environs, together with individual instructions for daily walking and hill climbing. He also prescribed isometric and isotonic resistance exercises as well as introduced the step test, using a special device which included a platform that descended and rose alternately as the patient exercised on it. Cardiac and respiratory rates, blood pressure and body temperature were recorded at rest and after exercise.

While working with A. Loewy in Davos in the early thirties, I introduced three new criteria for the evaluation of the effects of exercise at sea level and at altitude, viz., hematological, immunological and neurological. As to the last, I studied the effect of reduced atmospheric tension upon reflex responses, an aspect of exercise physiology which has since assumed importance in clinical endocrinology and in space medicine, also.

With the standardization and automation of measuring devices, a new era of ergometry and, thus, also of important facets of altitude physiology has been initiated.

Modern electronic computers allow instantaneous calculations and graphic recording of a multitude of respiratory, cardiovascular and other parameters.

Francis Lieber, the Reluctant Professor

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Historians in our discipline briefly mention Francis Lieber. This is proper because Lieber was on the periphery and not in the main stream of the physical education movement. He was, however, a part of Friedrich Ludwig Jahn's *Turnvereine* movement, and while his efforts toward physical education were one of his minor contributions, at another time and place they might have been major contributions as were so many of his other endeavors.

In order to understand Lieber in America it is necessary to know a bit about the young Lieber in Germany.

Francis Lieber was born in Berlin on March 18, 1798.[1] He was the tenth child in a family of twelve which included nine sons. The partitioning of Poland had cost the Lieber family most of their property and only by diligently attending to the ironware business was Frederick William Lieber able to maintain a precarious hold on the family's middle-class social standing and educate his sons. Despite the turbulent times, Francis had a happy childhood. He was an intelligent, good-looking, curly headed lad with many friends, and with a well deserved reputation as a prankster and dare-devil. For the most part he got along well with his brothers and sisters but on occasions teased them mercilessly. His mother usually brought the teasing to a halt by referring to him as a "regular Napoleon." So repugnant was that name that he was always shocked to hear his mother use it.[2]

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[1] Thomas Sergeant Perry, ed., *The Life and Letters of Francis Lieber* (Boston, 1882), p. 82.

[2] For more on the dispute over Lieber's birth date see the discussion in note 4, p. 3 of Frank Freidel, *Francis Lieber, Nineteenth-Century Liberal* (Baton Rouge: Louisiana State University Press, 1947).

That attitude of hostility and hatred toward the French dated back to that October day in 1806, when young Francis had wept with fury as he watched Napoleon's triumphant warriors marching through the streets of Berlin. Thus began an intense emotional nationalism that he was never to discard. This nationalism was nurtured and reinforced by the activities of his family. Both his father and his brothers, chafing under the burdens of the French imperial yoke, belonged to von Scharnhorst's undercover military system and to secret societies which plotted the downfall of the invaders. In such an emotionally charged atmosphere it is no wonder that young Francis wished to join his two older brothers in the War of Liberation of 1813-14. The success of the war seemed to eliminate the need for Francis to become a soldier.

In due time the young man began to try to select a career and after considerable searching decided to prepare himself as a military surgeon. Scarcely had he begun his studies when Napoleon returned from Elba and Prussia was again at war. Francis immediately enlisted in the famous Colberg regiment. Fighting at the battle of Namur he was seriously wounded in the throat, chest, and arm. Young Lieber was fortunate not to have been killed and was many weeks regaining his health which was complicated by an attack of typhus fever.[3]

Upon returning home, young Lieber, whose wounds had not completely healed, resumed his studies, this time to prepare himself for the university. At the same time, he rejoined Jahn and the Turners with whom he had first come in contact when he was only thirteen years of age. For years Lieber had maintained an active interest in the Turners and their nationalistic ideals. Now he enthusiastically joined Jahn's gymnasium and military swimming school. He became an expert swimmer and, while less proficient as a gymnast, was one of the most persevering. In a few months he had regained his strength and recovered the use of his left arm which had been seriously injured in the war. Obviously, Lieber was thoroughly aware of the rehabilitative values of physical activity.

So apt a pupil was young Lieber that he soon became, along with Charles Beck and Charles Follen, one of Jahn's lieutenants and a leader in the movement. Early in 1817, he was recommended by Jahn as an instructor in the gymnasium at Aachen. He was described by the old Turnvater "as beloved by the younger scholars, esteemed by those of the same or more advanced age."[4]

Unfortunately, the government in Berlin was not much more democratic than the one it had replaced. Before long, young Lieber's nationalistic zeal, which exceeded that of Jahn, brought him to the attention of the Prussian authorities. There followed months of arrests, releases, interrogations, and constant harassment which made the pursuit of his study extremely difficult. He was prevented from studying at several universities but finally succeeded in obtaining his Ph.D. from Jena in 1820.[5]

Still regarded as politically dangerous in Germany, young Lieber journeyed to Greece to take part in the Greek Revolution against the Turks. This proved to be a disastrous adventure and only with difficulty was the disillusioned and penniless young man able to escape and make his way to Rome. There he was befriended by Barthold G. Niebuhr, the celebrated German historian and at that time Prussian ambassador to Rome. Lieber spent several months with Neibuhr who was to make a lasting impression upon the political philosophy of the young man, and who thought he had succeeded in obtaining amnesty for his young protege from King Frederick Wilhelm. Expecting no further trouble in Prussia, the young man returned home. Unfortunately the ministry of police did not keep its word and soon Lieber was again subjected to the constant harassment that he had previously experienced. With no prospect for employment or further university training, young Lieber reluctantly concluded that he had no future in Germany and so on the evening of May 17, 1826, left for England and a new life.

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[3] Fred Eugene Leonard, *Pioneers of Modern Physical Training* (New York: Association Press, 1915), p. 77.

[4] Fred Eugene Leonard and George B. Affleck, *The History of Physical Education* (Philadelphia: Lea and Febiger, 1947), III, p. 245.

[5] For more on the discussion of Lieber's degree see note 10 of Freidel, *op. cit.*, p. 28.

London did not turn out to be the financial bonanza that Lieber had hoped. Employment opportunities turned out to be few and far between. He managed a bare existence by writing articles for minor German publications and by tutoring in German and Italian. While pursuing the latter he met Matilda Oppenheimer who was later to become his wife.

Through John Neal of Portland, Maine, author of adventure novels, he was introduced to George Bond, a New Englander who was in London looking for a permanent instructor for the newly founded Boston Gymnasium. A year earlier Charles Follen had founded the gymnasium and many Bostonians had become imbued with the idea that children should be educated physically as well as mentally, in much the fashion as had been the case with the ancient Greeks. The children were to spend a certain number of hours each week in the gymnasium neither for pleasure nor for military training, but to make them better able to earn a lucrative living. The Bostonians had hoped to obtain Jahn himself but, failing in that, they were persuaded by Lieber, after considerable negotiations, that he would be an admirable choice. Compensation for directing the gymnasium for the first year was to be $800 plus free passage to America as well as necessary apparatus and equipment. In addition Lieber was to be able to establish a swimming school which he would operate as his own private enterprise.[6]

Lieber arrived in New York on June 20, 1827. After spending a few days in New York, he journeyed to Boston where he met Follen and quickly established himself in a circle of Germans.

Lieber rather enjoyed his position of prominence as instructor of gymnastics and swimming and very quickly was engrossed in the work of the gymnasium. "Gymnastics, as advertised by the trustees would make weak children strong and enable busy men of sedentary occupations to gain the exercise required to preserve health in a shorter time than they could obtain it in any other way." [7]

With the gymnasium program under way, Lieber launched his ill-fated swimming school. The swimming season was well advanced and cold, rainy weather as well as the lack of parents who would pay the $10.00 instructional fee doomed the enterprise to failure. Early in September Lieber was visited by President John Quincy Adams, himself a remarkable swimmer, who praised the school and expressed the wish that there were many establishments of its kind in the country. Lieber developed a list of safety rules which is not unlike those found in swimming pools today.[8]

With the closing of the swimming pool Lieber turned his attention to the management of the gymnasium which proved to be a fad and was fast dying. Long before it failed Lieber accurately diagnosed its ills and suggested that the calisthenics were too regimented for individualistic, New England boys and that for activity to be alluring it must take the form of sports. For Americans he suggested a comprehensive physical education program fitted to age, sex, and individual requirements. He criticized all existing programs for women as being mere modifications of those for men. Instead he suggested a program of activity that would be very similar to rhythmic gymnastics or free exercise, the objective being health and grace.[9]

Some years later Lieber drew up a comprehensive plan for elementary and secondary education for the proposed Girard College for Orphans in Philadelphia which included a program of competitive and recreational sports, hygiene and sex education, and swimming.[10]

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[6] Friedel, op. cit., p. 51.

[7] Perry, op. cit., pp. 71-76.

[8] Friedel, op. cit., p. 58.

[9] Friedel, op. cit., p. 60 and Leonard, op. cit., p. 80.

Lieber realized the gymnasium business would never permit him to bring his bride elect to America so he turned his attention to more lucrative fields. He correctly surmised that there was a market for an inexpensive encyclopedia in America. Between 1829 and 1833, he edited the thirteen-volume *Encyclopedia Americana*, which brought him fame[11] and many friends, but little money. However, the enterprise was successful enough to bring Matilda Oppenheimer to America and they were married in 1829.

With the conclusion of the encyclopedia enterprise Lieber moved to Philadelphia in 1834. Desperate for remunerative employment he tried unsuccessfully to secure teaching positions at several colleges before attracting the attention of the authorities at South Carolina College. The College was in the midst of re-organization and seemed to offer considerable opportunity. Though reluctant to leave the East, in June of 1835, he accepted the professorship of History and Political Economy.

Almost immediately Lieber encountered problems. The first had to do with religion. Although no atheist, he was not kindly disposed toward the evangelistic type of religion that he encountered in Columbia, and he was not always as discreet as he might have been in his observations. Another problem was the matter of slavery which he thought to be a dirty and despicable business. However, he did manage to heed the advice of Bishop England of Charleston to stay out of religious and political controversy and to exercise his abilities in the best interest of his students. This was hard advice for a man of Lieber's convictions but for one in need of employment it was his salvation for many years. Another problem had to do with his attitude toward the people in the area. He thought the people to be totally devoid of intellectual interests both in the community and in the College. He disliked the climate intensely and Columbia's isolated location. Additionally, Lieber was not the most modest individual in the community. On one occasion he said, "I know that my work belongs to the list which begins with Aristotle and in which we find the names of Thomas Moore, Hobbs, Hugo Grotius, Puffendorf." [12] On still another occasion he said:

> "The other day I was asked whom I considered the greatest living political philosopher. I answered that if the question meant: Who is the most statesmanlike, substantial, earnest, historical, faithful and analyzing, I could not easily distinguish between two, who seem to me decidedly at the head, viz. deTocqueville and Lieber. This was very cool, but it is the truth which makes it still cooler. My interrogant said, 'I had the answer in mind, Lieber.' " [13]

Lieber sent a steady stream of letters to his friends in the East admonishing them to find him a position and get him out of the intellectual wasteland. Professor Daniel W. Hollis, in his splendid work on South Carolina College, has suggested that most of this grumbling can be classified as campaign literature designed to spur on to greater efforts his friends in the Lieber Emancipation Society, and that he had in fact exaggerated considerably the unfavorable conditions in Columbia, most particularly the intellectual climate at the College. The fact is, the College contained a rather distinguished faculty at that time. The truth is, Lieber's exile in the South was an extremely fruitful one for it was here that he wrote many of the books that made him famous and permitted him the time to maintain his correspondence with many of the distinguished personalities of the country.[14]

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[10] Francis Lieber, *A Constitution and Plan of Education for Girard College for Orphans, With an Introductory Report, Laid Before the Board of Trustees* (Philadelphia, 1834), pp. 112-20.

[11] Perry, op. cit., p. 87; membership certificate, American Academy of Arts and Sciences, November 10, 1830.

[12] Friedel, op. cit., p. 165.

[13] Friedel, op. cit., p. 276.

While at times his tenure at the College was in jeopardy, the fact that Lieber endured for 21 years can be largely attributed to three things: First was his attitude toward free trade in which he was in complete agreement with the majority of South Carolinians. His valuable service as an ardent exponent of it did much to ingratiate him with the people of the state. Secondly, he earned the reputation as a great teacher and this is a tribute because he had never had any teaching experience prior to coming to the College and did not relish the task anyway, plus [illegible]ct that he was never able to rid himself of a stiff Prussian accent. H[illegible] introduced techniques into his teaching that would be considered standard today but were unknown in his time. Thirdly, was the matter of productive scholarship. It was here that he wrote the *Manual of Political Ethics Designed Chiefly for the Use of Colleges and Students at Law*. This was followed by *Legal and Political Hermaneutics* and in 1853, what is perhaps his outstanding work, *Civil Liberty and Self Government*. It is upon such works as these that his fame today rests as a philosopher of nationalism. These books were written on the campus of South Carolina College and both the alumni and people of the state were proud of Lieber's fame and reflected in the glory it brought to the institution.[15]

Dr. Lieber's tenure ended at South Carolina College in December, 1856, with his failure to be elected president of the College. He had been acting president from 1849-51 and this was a position he cherished. His pro-slavery and theological opponents won the last battle, but it was a blessing in disguise. Already, the war clouds were gathering and had he remained in South Carolina he would have been in an untenable position. So it was with mixed feelings that he left South Carolina and journeyed to New York City where, within a few months, he joined the faculty of Columbia College as a professor of History and Political Science. Some years later he was transferred to the chair of Constitutional History and Public Law in the Law School.

The war years were particularly difficult for Lieber who supported the Union cause in the role of a publicist with all the vigor at his command. His eldest son died early in the conflict fighting on the side of the Confederacy. Two younger sons fought for the Union and one was severely wounded. During the war one of his most significant contributions was the development of the first modern codification of the laws of land warfare.

Lieber vigorously supported first Lincoln, and then Grant believing that their policies were absolutely essential to the preservation of the Union. So loyal had he been to the Union cause that in 1868, he was awarded the only semblance of patronage that he ever received. He was selected as umpire to settle claims arising from the Mexican War and this he did with distinction.

Francis Lieber died of heart failure on October 2, 1872. He lived a long and full life and there does not seem to be any question that his contributions to America were considerable. Space required that we omit here his interests in prison reform, the census, international copyright law, the international court, and even the daily used postcard. While Lieber, the man, has faded into the background, his ideas remain and this is the true test of the greatness of the man.

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[14] Daniel Walker Hollis, *South Carolina College, University of South Carolina*, (Columbia: University of South Carolina Press, 1951), I, pp. 181-82.

[15] Ibid, pp. 188-189 and A. C. Flora, Jr., "The Economic Ideas of Francis Lieber," *Essays in Economics*, No. 20, (June, 1969), p. 83.

Thomas Eakins – A Vignette of an American Sporting Artist[1]

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Thomas Eakins would have enjoyed being present on this occasion today. If he had been invited to speak before you, he would probably have started out in a manner such as this: "Gentlemen, I thank you for your cordial introduction. It reminded me of the criminal who went into the post office and saw his photographs plastered all over the bulletin boards. He looked at them awhile and then finally said, 'Well, it's nice to know someone wants you anyway.' " Eakins would have said this because he was one of those artists who was never really appreciated during his lifetime. He was thirty-four years old before he won his first award, and fifteen more years went by before he won his second one. Only two or three of his paintings ever sold for more than $1,000, and he was represented in but three museums during his lifetime. As a youth he was confronted with opposition and abuse, but in his declining years he suffered a worse fate, indifference and neglect.

I don't know how many of you are acquainted with Thomas Eakins. Along with Winslow Homer, he is considered as one of the foremost artists this country has produced. I wish I could have met him; not just because of his artistic or his athletic talent, but rather for his unique ability to see the relationship between sport and art.

If Eakins were living today, he would probably be considered as much a rebel as he was during his mid 19th century youth. I can imagine him having his difficulties on the campus as he sought more freedom for his art department colleagues. He would have much empathy for his students, particularly those who were liberal towards nudity or who had relaxed dress codes. Some of his principles were so strongly ingrained in him that there would be no limit to which he would not go to uphold them.

With the exception of about four years in Europe, Thomas Cowperthwait Eakins spent practically all of his life around Philadelphia. His Irish grandparents earned their livelihood as weavers, and his father was a writing master who taught that fancy type of penmanship which used to be found on deeds, testimonials, and diplomas. Tom and his dad were very close to each other; both were sportsmen and shared a lot of the outdoors with each other.

Let me give you an idea of the independent thinking that you could have observed around that household. Eakins graduated from a very advanced high school curriculum at Central High School in Philadelphia; the oldest high school in the country outside of New England. He was asked to give the commencement address in 1861, but he refused. Why? His answer was, "I have nothing original to tell the people. All I have learned I have learned from books, and others can find it there themselves." If I were a strict disciple of his, I would quit now because that's where most of this material comes from. Lloyd Goodrich is the man to whom I am most indebted in this respect.

Hunting, fishing, walking, ice skating, sailing, rowing, and swimming were his favorite recreational pursuits and the avid participation in these sports was reflected in his artistry in the years to come. Outdoor work predominated his early paintings.

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[1] Lloyd Goodrich, *Thomas Eakins, His Life and Work* (New York: Whitney Museum of American Art, 1933).

When we review the way in which he prepared himself as a painter, we begin to get a better understanding of his character. His dad tried to teach him the art of penmanship after graduation from high school, but his interest in this soon waned. However, largely through sketching with his dad out in the country on Sunday afternoons he began to get interested in painting, and soon enrolled in the Pennsylvania Academy of Fine Arts, the oldest art school in the country. There were no regular instructors there though so about the only thing he could do was to attend anatomy lectures and copy the paintings or casts. In fact, the school's philosophy was that if you wanted to become a good artist, the best training you could have would be to copy the works of the old masters. It was assumed that after you had done this a sufficient number of years you would acquire enough skill so that you could then begin using live models. This technique was termed "antiquing," and Eakins hated it.

The use of live models was to haunt Eakins all his life. This was Eakins' path toward truth in painting. Prudery was in vogue in Philadelphia in those days though; to such an extent, believe it or not, that the casts in the Pennsylvania Academy had to be covered in muslin on ladies' days. Life classes were sometimes formed, and the first rule at such times was that "there shall be no conversation between the model and any of the class members." Models wore masks to hide both their identity and their shame from those present. Sometimes Eakins would apply a light electrical shock to the models to show students muscle action.

Being dissatisfied with his progress, at the age of twenty-two Eakins became one of the avant garde to go to France which had replaced England as the art capital of the world. He enrolled in the Academie Des Beaux Arts, the most famous art school at that time. His instructor was Jean Leone Gerome who believed the complete painter to be the one who could combine the properties of both the camera and the microscope. From France, he went on to Spain in 1869 to study the effect of light, and he returned to America shortly afterwards.

He noticed considerable change here, change which had a noticeable effect on the art world. More wealth was evident, even more leisure, and there was a demand for luxury, especially art. Women artists were finally recognized, art schools began to flourish, the art dealer emerged, the first art magazine was published, the wealthy began to amass their great collections from Europe, and we observed our first direct artist-patron relationship.

Eakins opened his Philadelphia studio and used friends and members of his family for subjects. He sought to paint a true picture of the people he knew in their normal surroundings. Not only did he try to paint their physical likeness but their personality as well. Often his incredible talent angered the subject because of his ability to bring out some hidden trait. One man was asked why he did not sit for Eakins, and he replied, "Why, he'd bring out the traits of my character which I have been trying to hide from the public!"

He had to be back in America for five years before he could claim any attention, and that was after he painted the *Gross Clinic* which portrayed an operation performed by Dr. Tancoast. The unusual theme, plus the gruesome blood on the subject caused him to be severely criticized.

Sailing was one of his early paintings. Here we see two men out on a calm body of water with a slight breeze to the starboard. The bright sun has caused the shadow of the sail to be reflected in the brownish water, and we can imagine the men to be engaged in some ordinary conversation of the day.

Sailboats Racing on the Delaware was painted in 1874. This is a scene in which all sailors in the audience are acquainted, and we note a blending of colors that is admired by all connoisseurs of art. This is an appropriate time to spell out his philosophy of his craft. He felt that "one should observe nature in its largest perspective, to respect it and to be faithful to it, but not to slavishly copy it. The good artist watches Nature with an eagle eye. He sees what she does with light, with color, and with form. Then on a canvas big enough for his own purpose and smaller than Nature's, he commits Nature's tools to his own use. He will soon be sailing parallel to Nature and only where he wants to go. However, if the day ever comes when he thinks he can use another fashion from Nature's or make a better shaped boat, he'll capsize or stick in the mud, and no one will buy his paintings or sail with him and his old tub."

Eakins was a devotee of rowing which was the most popular sport in the Philadelphia area during the 1870's. The Schuylkill river was virtually alive with shells. He had a congenial relationship with the champion rowers of the day; therefore, it was only natural for him to include rowing as one of his preferred subjects. Here we see a preliminary sketch of *The Paired Oared Shell.* This is the finished painting.

The Biglen brothers were some of the foremost rowers in the area during that era, and as a result Eakins used them as models for several of his works. *John Biglen in a Single Scull* is now hanging in the art gallery at Yale University.

Here we see *Biglen Brothers Turning the Stake Boat.* Note the blue flag in the foreground which indicates the end of the lane. The Biglen brothers have just turned around the stake, and you see their competitors in background about ready to turn around their red flag towards their left. It's a sunny day, a clear grey sky, and calm water is everywhere. Eakins felt that the capable artist should be able to paint so authentically that the viewer should be able to determine the time of day, the season of the year, and even the temperature.

Another friend, Max Schmitt, was often used as a subject, and this is one version of "Max Schmitt in a Single Scull." The golden background, the placid water, the dark shadow of the bridge truss, and the action of the rower depict his classic style and use of paint in a very smooth manner.

This same setting on the Schuylkill was used for this painting of two men about ready to dip their oars and pull to the command of the coxswain. Note the ducks swimming in the foreground, the tracks in the sand to the right, and the true likeness of the bushes.

The original of this version of *Max Schmitt in a Single Scull* is in the Metropolitan Museum of Art in New York. The subject is seen resting on his oars in the foreground while the artist is in the scull in the background. It was a sunny afternoon, the water was glassy. You can almost feel the heat of the day. Eakins never painted outdoors. Instead, he made sketches, noted the color of the sky and other features. Then he would return to the studio to finish the painting.

Still another painting of recreation in that vicinity was *Oarsmen on the Schuylkill* which hangs in the Brooklyn Museum. It is believed that Eakins was the first man to use the sport of rowing as a painting theme. *The Biglen Brothers Rowing* was still another in which he often depicted a story that included sweat and outdoor recreation.

Eakins' pastimes usually were in the outdoors, but this did not preclude his interest in using indoor recreation for subjects. *The Chess Players* gave him an opportunity to do three portraits in a setting familiar to each of them. His chief object seemed to bring out the character of his subject, and his devotion to realism seldom permitted much flattery.

When you look at one of Eakins' paintings awhile you feel that he knew the scene extremely well, the figures were probably his friends, and he knew the subject from A to Z. Here we see *The Swimming Hole*, surroundings which most of us experienced in our youth. We see a man in the foreground diving. His other friends are enjoying the refreshing cool of the water, and the dog in the center foreground shares the fun. When Eakins wanted to paint action, such as in the case of the diver, to gain maximum authenticity, he would mold a wax model and paint from that. This was one of but three nudes which he painted in his lifetime.

The Pennsylvania Academy moved into a new building in 1876, and Eakins was invited to be on the faculty. He soon began to direct the school, and in doing so, practically eliminated the method of antique teaching. Instead of having his students make preliminary drawings and paint on top, he would have them do their initial drawing in color. Within three years the school was nearly self supporting, and Philadelphia ranked second to New York as an art power. Then his troubles began. He had begun to use live models rather than sculpture for subjects. This liberal attitude was probably due to his medical school training and his never ending search for perfect realism. The long, concealing clothes of the day covered up age, and he wanted to strip the subject to its essentials. There were perhaps two specific incidents that were his undoing at the school. One day for comparative purposes in demonstrating anatomy, he posed a man and a woman together and then proceeded to manipulate the muscles of the models. Later, while instructing in a woman's class he removed the loin cloth of the male model so that the action of the pelvis could be demonstrated. The Board could not take such conduct any longer and asked for his resignation in 1886. Many of his loyal students banded together to sign a petition to have him reinstated. While it was to no avail, I think it timely to show the attitude of the Board as compared with Board members in today's troubled educational world. One said, "The idea of allowing students to run the Academy is ridiculous. All this talk about a majority of them leaving school is nothing. Let them leave if they want to. If all left, we could close the school and save money. We have an annual deficiency of about $7,000; the school is not self supporting. This very fact makes it presumptuous on their part to tell us what to do. If any of them left, it would be their loss, not our's."

His forced resignation was a big blow to Eakins because he had been instrumental in the great growth of the Academy. He received unpleasant publicity and was to lose his status as a portrait painter in the art world. He was a rebel against the ruling forces of the art community, and he lost.

When Eakins was in his fifties, boxing took his fancy because it gave him an opportunity to see the body in action. *Between Rounds* depicted a scene at the old boxing arena at the corner of Broad and Cherry Streets in Philadelphia. Boxing was not yet a fashionable sport for men and women to witness, and his paintings were some of the first. Here is a *close-up of the timer* who was shown in the previous painting. Eakins frequently attended the local matches, and fighters often came to his studio to pose.

Salutat, now hanging in the Phillips Andover Academy in Massachusetts, shows the fighter paying tribute to his fans. Each of the figures in the canvas has been placed so that the fighter receives as much attention while poised on the threshold of the ring as he will later receive upon entering it. However, the artist is less interested in the event than in the boxer who is a hero even before the fight takes place.

The Baseball Players is almost a primitive painting; at least it reveals a uniformed batter preparing to face the pitch while a maskless catcher with a lightweight glove gets set for the pitch. The scene is a far cry from that seen in a big league stadium today.

The Wrestlers was one of Eakins' rare attempts to use that sport as a subject in spite of the vast opportunities to use its near nude bodies as centers for action.

It was not until 1900 that Eakins began to be recognized. With this encouragement he painted twice as much from 1900 to 1910 than in any previous decade. However, his health faded, his eyes in particular, and death came in 1916. Then the recognition that had avoided him all his life came his way. Museums began to purchase his works, more was published about him in the next few years than throughout his lifetime. His wife, who was childless, forgot and forgave, and presented sixty of his paintings to the Pennsylvania Museum of Art.

Until those last years he suffered an obscurity more complete than any other American artist of his stature. In a worldly sense, he was a total failure; even his portraits were often a labor of love. Nevertheless, he was one of the chief American leaders of the naturalistic movement in the second half of the nineteenth century. A combination of artist and scientist, he had a thorough understanding of natural forms which gave his paintings of everyday American life great substance and sculptural quality.

We are all acquainted with the feeling called empathy, the feeling that we are entering into a physical action which we see taking place. Sometimes we keep still and seem to read the action in our muscles; sometimes we want to help a player by giving him a little "body English"; sometimes we go out and mimic the action. At its best, a work of art deriving from sports or games gives us the same empathic reaction that we would get from the action itself. The art of Thomas Eakins had this quality.

Joe Louis, Symbol

Alexander J. Young, Jr.
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HISTORY WATCHES HANDS

"History watches hands; not lips" [1] — Sidney Hook

In a poverty ridden section of Alabama known as "Buckalew Mountain Country," which lies in the beautiful area that inspired Carl Carmer's "Stars Fell on Alabama,"[2] Joe Louis Barrow, the fifth son of a sharecropper, was born on May 13, 1914.[3] Even the most optimistic hopes of his mother, as she lay watching her newborn, must have fallen short of the success he was destined to achieve.

Some quarter of a century after his somewhat less than awe-inspiring beginning, Joe Louis' picture was to hang in practically every Negro home in the United States.[4] At age twenty-six, he was considered by some to be the "most successful Negro on earth."[5]

His popularity with the proverbial "man in the street" was constantly in evidence. A Detroit congregation could be heard one Sunday singing:

He don't smoke
Amen
He don't pour red hot likker down his throat
Amen
He fights clean and he shall stand before kings
Amen to all that, Amen[6]

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[1] Sidney Hook, *The Hero in History* (London: Secker and Warburg, 1945), p. 17.

[2] Floyd Tillery, "Untold Chapters in the Life of Joe Louis," *The Ring*, Vol. XV, No. 4 (May, 1936), p. 12.

[3] Andrew S. N. Young, *Negro Firsts in Sports* (Chicago: Johnson Publishing Company, 1963), p. 105.

[4] Earl Brown, "Joe Louis," *Life*, Vol. 8, No. 25 (June 17, 1940), 50.

[5] *Ibid.*, p. 49.

[6] *New York World Telegram*, September 30, 1935, SC, JLF, Schomberg Collection, Joe Louis Folder, New York Public Library.

Folk songs, both spontaneous and written, were sung in many Negro neighborhoods.[7] Composer Claude Austin wrote an operetta about him.[8] He acted in several movies and was the subject of "The Joe Louis Story."[9] The Baltimore *Afro-American* kept its readers informed for weeks ahead concerning the opening of the films in which Joe Louis appeared.

His popularity was such that even before he became heavyweight champion of the world, political figures were arranging meetings with him under the watchful eyes of the press. The Negro press was anything but naive about the motivation behind such meetings; yet they continued to get good coverage. It is a fact that these meetings took place long before Louis became champion.

In the Senate on July 8, 1939, voting on a relief appropriation bill had to be postponed for lack of a quorum because it coincided with the Louis-Galento fight.[10] In this instance, no political motives were involved. It is rather unlikely that the Senate will ever again be held up because of a boxing match.

Before his second fight with Max Schmelling, Joe Louis met and talked with President Roosevelt.[11] A great many stories evolved as a result of this meeting, particularly after the war broke out. Most of them were not entirely true, but it is a fact that President Roosevelt became an avid fan of Louis and often rearranged his schedule so that he could hear the fights on the radio.[12]

During a tour of Great Britain, the entire body of the House of Commons came to their feet when Louis entered with his wife, Marva.[13] No single event better exhibits the respect and admiration that was his at the pinnacle of his career.

To what did Joe Louis owe this undeniable popularity? First and foremost, he was the best heavyweight boxer of his time. He held the world's heavyweight championship for eleven years, eight months, and seven days. He fought every challenger the public felt had potential and gave return bouts in ten instances when the challenger proved formidable on the first try.

He was only the second Negro to hold the heavyweight crown in modern history, although there had been twelve Negro champions in lighter weights.[14] Actually, there had been prominent Negro contenders for the heavyweight title throughout the twenties. Even the great Jack Dempsey had his dark shadow. Harry Wills, unquestionably the most noteworthy contender for Dempsey's title, signed to fight him on several occasions. For various reasons, the bout never came about. One source holds promoter Tex Rickard responsible. His reasoning was supposedly based on the probability of a poor gate.[15] It has also been hinted that political pressure from Washington was the basis for the default.[16] Though this was the most renowned instance of the blatant prejudice which existed, Wills was not the only Negro to be refused a bid.

Others who knocked on the door but never quite made it included Peter Jackson, Sam Langford, and Jim Jonson.[17]

Though it may or may not be true, Jack Johnson is almost solely blamed for the crown's inaccessibility to Negro contenders for the two decades between his defection and Joe Louis' reign. Johnson won the crown from Jim Jeffries in 1910. Within the hour, several bitter incidents occurred.[18] A Negro was lynched in Charleston, Missouri, and another was dragged from a streetcar in Harlem and beaten to death. A white man was shot in Arkansas. In another run-in, a white physician, Alexander Brown, had to hold off his neighbors at gun-point to save the life of a Negro who was hiding in his home.

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[7] *New York Post*, December 14, 1956, SC, JLF; see also P.M., December 16, 1946, SC, JLF.

[8] *New York Times Magazine*, June 14, 1936, SC, JLF.

[9] *New York Herald Tribune*, June 25, 1955, SC, JLF.

[10] *The Afro-American*, July 8, 1939, p. 21.

[11] *The New York Times*, August 28, 1935, 23:6.

[12] *Joe Louis Scrapbook*, No. 12, SC.

[13] Joe Louis, "My Story," *Life* (November 15, 1948), 144, SC, JLF.

[14] *Literary Digest*, 123 (July 3, 1937), 34, SC, JLF.

[15] *The Ring*, Vol. XXVIII, No. 10 (November, 1949), p. 4.

[16] *Chicago Defender*, May 4, 1935, p. 25.

[17] *Philadelphia Tribune*, June 27, 1935, SC, JLF.

[18] *New York Post*, February 19, 1941, SC, JLF.

What was it about Johnson that evoked this bitterness and revulsion? The most popular consensus is that it was due solely to the color of his skin. Add to this his haughty carriage, his refusal to train, and the utter disdain he exhibited to each beaten opponent and a picture appears which is probably close to his "public image."

Shortly after he gained the crown, pictures were published showing Johnson in the company of white women while in Paris. The clamor caused by these photos didn't have a chance to die before he had married a white woman. This "unpardonable sin" was magnified when his wife committed suicide and he was goaded into smiling for the cameras at her funeral.[19] He later married another white woman and continued his high living until his money ran out. This happened shortly after he lost the title in a fight he subsequently admitted throwing.[20] Pictures of the knockout show Johnson shielding his eyes from the sun as he was being counted out.

The public's sympathy was aroused by Joe Louis' clean slate early in his career and intensified by the unpopular Jack Johnson, then a side show attraction on Coney Island, who publicly ridiculed Louis every chance he got.[21]

At any rate, Joe Louis did not start the "white hope" panic that Johnson had some twenty-two years before him.[22] He never aroused hate when he stood over a fallen white man because it was not his habit to gloat or discredit his opponent.[23]

In 1936, New York sportswriter Dan Parker wrote: "Joe has one expression. He uses this expression when he wishes to register amazement, scorn, pain, anger, joy, revenge, skepticism, satisfaction, or disappointment." [24] This stoic expression was the only face Louis showed the public. Because of his quiet carriage, critics trying to draw comparisons between the two colored heavyweight champions were left only with color and boxing ability to draw analogies.

Even the Southern newspapers, which had ignored "race" contenders from the time of Jack Johnson, did not do so with the "Brown Bomber" from Detroit. As early as April, 1935, Joe Louis' picture had appeared in at least three different newspapers in each of the following states: Texas, Mississippi, Alabama, Florida, and Georgia.[25] In late 1934, the *Louisiana Weekly* hinted that the promoters were pleased with the popularity of the new heavyweight sensation.[26]

His early record as a drawing card was as impressive as was his record in the won-lost column. Louis' ability to fill any arena he fought in brought heavyweight champion Jim Braddock to his door seeking a match instead of the reverse.[27] Later disclosures indicated that there was much more to this situation than was immediately apparent; but the "drawing" ability of Louis was extremely important.

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[19] Scully, p. 175.

[20] Edward Van Every, *Joe Louis, Man and Super Fighter* (New York: Frederick A. Stokes Company, 1936), p. 78.

[21] *Newsweek*, July 3, 1937, 22, SC, JLF.

[22] Grantland Rice, "The Spotlight," *New York Sun*, March 2, 1938, SC, JLF: see also: *Newsweek*, 12:19, (December 26, 1938), SC, JLF.

[23] *Literary Digest*, 121:36, (June 13, 1936), SC, JLF.

[24] *Ibid.*

[25] *Chicago Defender*, April 13, 1935, p. 17.

[26] *Louisiana Weekly*, December 29, 1934, SC, JLF.

[27] *Journal and Guide*, May 23, 1936, SC, JLF.

When Louis knocked out Braddock for the title, he became the youngest heavyweight champion in history.* [8] This was the first of many records he was to set with his fists; and he was also on the path to great acclaim as a gentleman, sportsman, and humanitarian.

By 1942, Joe Louis had already proven himself the best in the world. He had avenged the only defeat in his professional career and beaten all logical contenders up to that time. On January 9, 1942, Louis put his title on the line in a fight with 250 pound Buddy Baer. On March 27 he defended against 254 pound Abe Simon. He knocked out each early in the fight. Actually, he had fought and beaten "Goliath" Primo Carnera early in his pro career. There is a unique factor concerning his fights with Simon and Baer that separates them and Louis from the run-of-the-mill. In both fights, Joe Louis risked his title and contributed his entire cut to charity, the earlier purse going to the Navy relief and the latter to the Army relief fund.

From June 12, 1942, to October 1, 1945, Joe Louis was in the Army.[9] He received a great deal of press coverage during this period. His fame was established and the public was kept well-informed of his exhibition tours, charitable acts, and general everyday habits. In September, 1942, *Esquire* magazine credited Joe Louis with being the only athlete of the decade with the ability to outrank the racehorse as a seller of newspapers.[10] Because of the status he held, his personal appearances became matters of public record. On more than a few occasions, a slip in grammar or a unique expression would escape his lips and be immediately usurped by someone in quest of a slogan for building wartime morale. Once he was credited with naming the war when he finished a speech with the statement, "We're on God's side," instead of the reverse.[11] The war was later referred to, on occasion, as "God's war."

Joe Louis, because of his uncanny boxing ability and unique "public personality," represented many things to many people. If he has a competitor for the title of "most popular boxer" of his time, it could only be Ham Fisher's Joe Palooka who has reigned indomitable since the 1930's.

THE PUBLIC IMAGE

Joe Louis was constantly beseiged by reporters who were free to evaluate him. Occasionally bizarre descriptions appeared concerning both his public and private personalities. This type of picture appeared infrequently when compared to the more popular "conservative" view of Louis' personality, and both views must be evaluated critically.

There exists another distinction: the difference between the evaluations made by intimate friends and the evaluations made by reports. Though these two were not identical, they were never as different as might be expected. The differences that did exist diminished as Joe Louis progressed in his career.

Sidney Hook in his book, *The Hero in History*, theorizes that the minimum qualifications for a leader are inversely dependent on the need for leadership.[12] Immediately evident in this case was a need in the sport itself. To continue as a popular spectacle, boxing needed a drawing card. Perhaps more important, it needed a cleaner image. Joe Louis proved to be a godsend.

As early as 1934, Louis was cited as a possible "savior of the fight game." *New York Post* columnist, Stanley Frank, compared the holocaust which developed after the Jack Johnson victory in 1910 with the fact that the Louis-Braddock title fight took place at Comiskey Park, which was located at the exact site of the notorious 1919 riots in Chicago. He theorized that the "human race must be improving."[33] The accolades Joe received early in his career did nothing to stop the speculation that he was the answer to boxing's dilemma.

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* Since this time, Floyd Patterson and later Cassius Clay have become heavyweight champions at younger ages.

[8] *Joe Louis Scrapbook*, No. 6, 32, SC.

[9] Harold Rice, *Within the Ropes* (New York: Stephen-Paul, 1946), p. 96.

[10] *Esquire*, Vol. XVIII, No. 3, (September, 1942), 52, SC, JLF.

[11] *New York Daily Worker*, January 26, 1942, SC, JLF.

[12] Hook, *op. cit.*, p. 17.

It was the intention of neither Joe Louis nor his managers to save the game of boxing. They did, however, state that they intended to provide a better place in sports for the Negro. The extent to which Joe Louis was responsible for improvement is a question which will never be answered.

Jimmy Cannon, a well-known sportswriter, credited Louis with defeating bigotry in the fight game. In 1949, he stated that because of Joe Louis, boxing offered the Negro complete equality.[34] This is one man's opinion. Even when strengthened by a multitude of writers who make the same inference, it remains opinion. On the other hand, Louis' reign parallels the emancipation of the Negro in sports and he has to be considered instrumental in its completion.

Public opinion is a nebulous thing. In its simplest form a public image is even more nebulous. The Joe Louis image is perhaps easier to describe than that of most public figures because he was not a highly controversial figure. Particularly at the start of his career, when the public would be expected to be most suspicious, he was presented as a simple, clean-cut, well-meaning athlete with uncanny natural boxing ability. Though he may have had the innate makings of these attributes, what the public saw did not occur by accident. Much of his "public image" was designed by his managers. These men are very important in the Louis story. Actually, the incidents leading up to the very successful agreement between Louis and his managers provide a story in itself.

If any one of several men had been gifted with foresight, the Joe Louis story would have been different. Although the men involved were to rue their decision, they certainly had no way of predicting what the fighter was destined to become.

In the beginning, Louis tried to sell the managing rights to his professional contract on two different occasions. He failed to get a taker at five hundred dollars and later at two hundred fifty dollars. He finally signed for free with John Roxborough and Julian Black, both upperclass Negroes from Detroit.[35] For reasons that seem both altruistic and practical, his managers set out to make Joe Louis the model he became.

The extent to which they were successful is legend. The precise extent of the role they played is something else. One magazine went so far as to credit John Roxborough with teaching Louis to brush his teeth, take a bath, and eat with a knife and fork.[36] This hardly seems reasonable, but it is true that Roxborough outlined several rules Louis agreed to abide by before agreement was reached about the managing arrangement. Included in the list were:

1) He was never to have his picture taken alone with a white woman.
2) He was never to go into a night club alone.[37]
3) There would be no soft fights.
4) There would be no fixed fights.
5) He was never to gloat over a fallen opponent.
6) He was to keep a "dead pan" in front of the cameras.
7) He was to live and fight clean.[38]

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[33] *New York Post*, February 19, 1941, SC, JLF.

[34] *Sports Illustrated*, Vol. I, No. 1, (February, 1949), p. 67.

[35] *Journal and Guide*, May 4, 1936, SC, JLF.

[36] *Time*, September 29, 1941, SC, JLF.

[37] *Time Magazine*, September 29, 1941, p. 62.

[38] Jack Sher, "Brown Bomber," *Twelve Sport Immortals*, ed. by Ernest Victor Heyn, (New York: Bartholomew House, 1949), p. 270.

In June, 1935, Roxborough was quoted as saying, "One little slip of any kind—no matter how great a fighter he gives promise of becoming—and we would immediately wash our hands of him."[59] He claimed that the most important thing Louis could do was to be a credit to his race.

Whether or not Black or Roxborough would have washed their hands of him is a matter of conjecture. But there seems little doubt that Roxborough meant to keep Louis' image clean. Once when Louis was caught speeding at 90 m.p.h. in Chicago, Roxborough took Louis' license away and hired the boxer's brother as chauffeur. This arrangement lasted for several years.[60]

The Roxborough-Black control went beyond the man's habits. The following incident occurred near ringside at the Louis-Baer fight in 1935. As the story goes, a Negro fan became overly excited and was jumping up and down yelling, "Kill him Joe." Louis' seconds stood up and squelched the exuberance with the explanation that it was the kind of thing which could do harm.[61] The yelling stopped. This incident reached the papers, but there probably were others like it that were not reported. It was all part of the promotional work that played such a large part in Joe Louis' success.

A 1941 *Time Magazine* editorial entitled, "Black Moses," listed four reasons why the Joe Louis buildup worked:

1) promotional genius of Mike Jacobs (the man who promoted most of Joe's fights);
2) astuteness of Louis' managers;
3) change in the United States' attitude toward Negroes since Jack Johnson's day;
4) Louis' naivete, natural reserve, and disinterest in liquor and tobacco.[62]

On the cover of this same issue of *Time Magazine* was a picture of Louis with the caption, "I want to be honest so that the next colored boy can get the same break I got." In the editorial this statement was followed with, "If I cut the fool, I'll let my people down."[63]

The newspapers, particularly early in his climb, were full of brief biographical sketches of Louis. They appeared often enough to elicit the thought that most of his fans must have had some knowledge of his childhood. Varying personal stories accompanied these sketches; but for the most part, they agreed enough to expect that many of his fans had at least a composite picture of Joe Louis' early life. The typical fan probably knew that Louis had been born in Alabama and had moved to Detroit when he was about ten. He also knew that the family was highly religious and his mother was a strong influence on him. He was sure that Louis didn't drink or smoke and always presented a wholesome picture in public. About Joe Louis' personality away from the public eye, the fan still speculated.

In the beginning, many writers accused Louis of being a puppet. There were ample grounds for this assumption, but it is interesting to note that no one ever accused him of being misused. The more prevalent accusation was that John Roxborough was using him as an ambassador of racial good will. There is truth to the statement. But it is also true that Joe Louis ceased being a puppet and became the part. The transition came gradually, but it did come. As his career wore on, he slowly took the responsibility of making his own decisions until his managers handled only his business affairs. His personal life, both public and private, was his own.[44]

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[59] *New York Sun*, June 17, 1935, SC, JLF.

[60] *Time Magazine*, September 29, 1941, p. 60.

[61] *New York Daily News*, September 26, 1935, SC, JLF.

[62] *Time Magazine*, September 29, 1941, p. 62.

[63] *Ibid*, p. 63.

He once was described as saying less than any man in sports history, including Dummy Taylor, the New York Giant pitcher who was a mute.[45] Not everybody felt his reticence was a virtue. Some said he sulked easily.[46] His lack of "friendliness" to members of the Associated Press is said to have prevented him from getting a higher poll rating as a sports attraction in 1938.[47] For the most part he was credited with being modest, confident, reverent, and clean-living.[48] He showed concern for his mother and family, loyalty to his race, and was an "inspiration to race youth." [49] It was also said that he read a line or two from the Bible before each fight.[50]

His inability to express himself did nothing to abate his growing popularity with his own people, but it did pave the way for some "folksy" tales which may or may not be true. Some of these stories concerned his dietary practices. His eating prowess became legendary and he was often photographed with large platters of home-fried chicken in front of him. As an amateur, he supposedly lost one fight because he went on a watermelon eating spree shortly before he was scheduled to fight.[51] The story also spread that he was once asked after a fight if he had stuck to his diet. His answer was, "Yep, cep I ate twelve bananas just fore the fight." [52] Add all this to the twenty to thirty apples[53] and the four packs of gum he supposedly chewed daily[54] and the diet resembles that of a "sumo" wrestler of Japan. These stories are at least exaggerated if not wholly fictitious, but they still play a part in building a "public image."

There were those among the intellectual Negroes who resented Louis being pictured as a "lazy, sleeping, eating, Hollywood style Negro." [55] There were many such accounts, particularly early in his career. It was the opinion of a writer of the *Daily Worker* that by 1940 these so-called "inside stories" were no longer believed. For the most part this is probably true.[56] Certainly, Louis' intellectual followers had grounds for their criticism. On the other hand, the stories were not completely without basis.

Several weeks of intense promotional work preceded his fight with Gus Dorazio in 1941. Louis upset his handlers when he asked Dorazio what his name was at the weigh-in.[57] It didn't take too many stories like this to start certain members of the press toward generalizations which were not entirely true.

There is the possibility that this type of image might well have helped Louis overcome the obstacle of the "White Hope" era. If credence is given to the theory that many people feared another champion in the "Jack Johnson image," what could be more incongruous with the fore-described arrogance of Johnson than the picture of the lazy, apathetic, home-spun, "Hollywood-style" Negro? At any rate, this type of story faded as Louis' career moved into the forties.

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[44] *Sport*, Vol. IV, No. 3, (March, 1948), p. 77.

[45] *New York Times*, June 14, 1936, Magazine Section, SC, JLF.

[46] *Ibid.*

[47] *The Afro-American*, January 14, 1939, p. 23.

[48] *Chicago Defender*, June 25, 1938, p. 7.

[49] *Ibid.*

[50] Edward Van Every, *Joe Louis, Man and Super Fighter* (New York: Frederick A. Stokes Company, 1936), p. 7.

[51] *Literary Digest*, May 4, 1935, SC, JLF, p. 35.

[52] *New York Times*, June 14, 1936, Magazine Section, SC, JLF.

[53] *Ibid.*

[54] *Newsweek*, Vol. VI, (July 6, 1935), p. 23.

[55] *Daily Worker*, July 9, 1940, SC, JLF.

[56] *Ibid.*

[57] *The Afro-American*, February 22, 1941, p. 19.

The trait which his Negro following seemed to respect most was that his personality drew the respect of the whites in that they didn't try to make a clown of him. They appreciated the fact that there was nothing "Uncle Tomee" about him.[58]

It is evident that the early Joe Louis image differed greatly from the image he portrayed later in his career. This change didn't take place overnight. Nor can it be said that either one was "phony." Jimmy Cannon's statement that of all his opponents, Louis hated only Max Schmelling and Joe Walcott might serve as an analogy. Before his second fight with Schmelling, Louis was pensive and brooding, certainly not sarcastic as he was with Walcott. Assuming that he felt an equal distaste for both men, why did he react so differently? What was the difference in the two situations?

The most important difference was self-confidence. Louis admitted after beating Schmelling that it was the first time he felt like a "real champion."[59] Between Schmelling and Walcott, Louis experienced nothing but success. He became aware that he had the ability to express himself and that when he did so, people listened. By the time he got out of the service, Louis also learned that he had gained stature enough to stick his neck out a little. His following no longer demanded perfection.

Considering all the implications of his critics, Louis has to be considered among the most popular of champions. When great talent brings a personality into the limelight, as was true in this case, popularity can usually be achieved by simply being unoffensive. This seems to have been Joe Louis' greatest strength.

Joe Louis won seventy-three of his seventy-six professional fights. Sixty-one of these wins were by knockouts. As a professional fighter he never fought in anything but a main event.

His record is replete with charitable contributions topped off by his two title fights for the Army and Navy Relief Funds. He was also known as a "soft touch" to anybody who could get close enough to ask.

His military record was excellent and included the "Legion of Merit" award. His civilian trophy case was full of awards of all types, including such things as a plaque describing him as the "Outstanding American Negro of 1941"[60] and another calling him the "Most Outstanding Negro Athlete of All Time."[61]

When the purpose of a research is to determine the effect a public figure has on the public it is necessary to determine the extent of exposure in order to predict the extent of effect.

The people most aware of the Joe Louis story were the Blacks, who found it easiest to vicariously associate themselves with his success. Negro periodicals and newspapers gave the fullest coverage to all phases of Louis' public life. The *Chicago Defender* published a special issue devoted entirely to the Louis-Carnera fight on June 25, 1935. He was listed among the country's most popular people in a 1947 Gallup Poll.[62]

Harlem celebrated and mourned as Louis' fortunes rose and fell. It was estimated that Harlem businessmen lost five hundred thousand dollars when Louis lost to Schmelling. The next day lines which covered several blocks could be seen extending from the pawn shops.[63]

After the Louis-Max Baer fight, five hundred policemen watched helplessly as an estimated one hundred and fifty thousand Negroes danced, blew horns, pounded pots and pans and shadow boxed in the streets.[64] This behavior was typical of Black sections in all of the country's major cities. This kind of total celebration began to wane as his career progressed. The expected successes after he won the championship were evidently not as exciting.

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[58] *Pittsburgh Courier*, April 6, 1935, SC, JLF.

[59] *New York Sun*, June 23, 1938, SC, JLF.

[60] *New York Daily Worker*, January 26, 1942.

[61] *The Negro Handbook*, 1942, p. 231.

[62] *Look*, Vol. 11, No. 13, (June 24, 1947), p. 58.

[63] *New York World Telegram*, June 20, 1936, SC, JLF.

Louis was never involved in scandal concerning his boxing. His romantic problems occurred after his reputation was made, and although they tarnished his "public halo," the public never felt his boxing was suspect. Even when his managers were indicted he remained above suspicion. Their problems had nothing to do with boxing.

As early as 1936, Joe Louis' picture had appeared in newspapers in China, Portugal, Spain, Russia, Germany, England, India, Africa, France, Bulgaria, and Czechoslovakia.[65] In 1951, thousands of Japanese swarmed over his car when he landed in Tokyo for a three week tour.[66]

Louis' reputation and consequent influence was international in scope. His fight with Primo Carnera received publicity because it paralleled the Italian-Ethiopian war. This publicity proved to be nothing when compared to the international fervor aroused when he fought Max Schmelling for the second time.

After his initial victory over Louis in their first fight, Schmelling received publicized congratulatory cables from Hitler, Goering and Goebbels. He even gave the photographers a "Heil Hitler."[67] *Der Weltkampf*, a German magazine, described Schmelling's victory as one for the white race, Europeans, and White America.[68] Their second fight became an international spectacle. Intelligent writers tried to minimize the international cultural aspects of the fight, but to no avail. Louis hit Schmelling forty-one times and knocked him down three times before knocking him out in two minutes and forty-one seconds of the first round.[69] The results produced all of the expected international fanfare.

It's probable that Louis was more popular and thereby affected more people than any boxer in history.

The September 11, 1937, *The Afro-American* ran a full page on what was called the "Renaissance in Sports over Forty-five Years." In it was stated, "boxing led the way," and "Joe Louis is the Kingpin."[70] Citing the many people who credit Joe Louis with the breakdown in the color line in sports would still not prove it.

The facts are:

1) Joe Louis' career spanned the time period which might be called the heart of this "Renaissance."
2) Boxing was among the first sports to open its doors.
3) Louis did receive unequaled publicity concerning these changes.
4) He was, in fact, very influential along these lines. As is true of most social questions of this nature, the actual extent of his influence can only be guessed.

For a long time the Black Athlete was an enigma. The *Chicago Defender* wrote in 1935 that Louis was the first Negro athlete who was able to draw Negro fans in proportion to the whites in attendance.[71]

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[64] *New York Sun*, June 26, 1935, SC, JLF.

[65] *Chicago Defender*, January 4, 1936, p. 1.

[66] *New York Times*, November 15, 1951, SC, JLF.

[67] Scott, p. 3.

[68] *The Crisis*, October, 1936, p. 301.

[69] Heyn, p. 227.

[70] *The Afro-American*, September 11, 1937, p. 20.

[71] *Chicago Defender*, May 4, 1935, p. 9.

Jimmy Cannon, sportswriter, once wrote that Louis was the only athlete he had ever met who could live up to the "myth of athletics." [72] This "myth" was something that existed before Cassius Clay and Joe Namath. Louis always made a positive attack on race problems. He took specific action in many areas of "human relations" late in his career.

Joe Louis' talent, personality, disposition and altruistic nature were responsible for:

1) the restoration of pride and honesty to the sport of boxing;
2) the restoration of the million dollar gate;
3) the establishment of the precedent that the heavyweight champion should give all qualified challengers a chance.

His public image was at least partly responsible for:

1) the breakdown of the color line in American sports;
2) the breakdown of the color line in many other phases of American life;
3) the bettering of race relations the world over.

The *Negro Digest* put it one way with the following anecdote. Two Negroes were talking. One said, "If we had more Negroes like Joe Louis, things would be better for us." "Sure nuff," said the other, "but if we had more white folks like Joe, things would be better still."[73] Perhaps a few more people like Joe Louis in every race would brighten things up. Jimmy Cannon provided an apposite finish when he wrote, "Years ago, I said Louis was a credit to his race—naturally, I meant the human race." [74]

Georges Hebert: Modern Pioneer of French 'Natural' Physical Education

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INTRODUCTION

Background

Until the turn of the century, physical education in France had been dominated by the concepts of Ling (1776-1839) and Jahn (1778-1835) which in turn had replaced France's first organized system of physical education as introduced by Franciscus Amoros (1769-1848).[1] During the first years of the twentieth century new ideas based on research in physiology and related sciences had been introduced by physiologists and hygienists such as Ferdinand Lagrange (1846-1909), Philippe Tissié (1852-1935), Etienne Marey (1830-1904) and Georges Demeny (1850-1917). The latter developed a new teaching technique based on *chronophotography* (movement analysis) which he attempted to popularize as the "French School."[2] Also affecting a change in the methods of physical education as then practiced was the activity of Baron Pierre de Coubertin (1863-1957), the founder of the modern Olympic Games.

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[72] *New York Post*, May 13, 1954, SC, JLF.

[73] Roi Ottley, "New World A-Coming," *Negro Digest*, October, 1943, p. 48.

[74] *New York Post*, May 13, 1954, SC, JLF.

[1] Roger Vuillemin, *Momento d'Education Physique et d'Initiation Sportive*, (Paris: Presses Universitaries de France, 1946), p. 9.

The first significant change in modern physical education was brought about by a naval officer, Georges Hébert (1875-1957)[3] who had been put in charge of the physical education program at the Naval Academy at Lorient in 1904.[4]

Georges Hébert was born in 1875 in Paris. His early youth was marked by unhappiness. From the age of seven until he entered the *Ecole Naval* in preparation for his naval career, he spent his years in boarding schools. As a young lieutenant his skill in gymnastics assured him a leading position with the *Cirque Mollier*, an outstanding amateur group of gymnasts in Paris.[5] From 1895-1903 Hébert served as an officer on one of the last sailing ships of the French navy. During his extended voyages he visited many parts of the world and was able to observe the physical characteristics and abilities of the natives of various primitive societies as well as those of the "white" people of North America[6]* and those of his own crew. Interested in matters of education and particularly in those of physical education, Hébert noted the apparent differences between the products of 'nature' and those of 'culture' and concluded that the former's healthy condition, both physically as well as morally, was determined greatly by the more primitive conditions of their daily existence. He admired the vigor and natural grace their actions expressed and advocated, as did Rousseau, that France turn from intellectual over-emphasis in education to more natural ways of harmonious development.[8] During these sailing years concepts for the development of a method of natural and utile exercises based on the principles of natural hygiene were developed.

Upon his return to France in 1904 Hébert was charged with the responsibility for the physical education program of navy personnel. This assignment gave him the opportunity to put his theories into practice. A program of purposeful training, execution of which was based on sustained and continuous labor, was introduced. Other practices such as exercising in the open air with a minimum of clothing were considered novel aspects of the *méthode naturelle*. By 1905 Hébert experimented for the first time with the *Fiche d'Epreuve*, which was a self-testing device developed to encourage competition with one's self. Originally consisting of five items this standardized test numbered a series of twelve items by 1909.

The natural method of Hébert was in direct opposition to the then accepted methods of the armed forces and the public schools. His method gradually received support and was formally adopted by the Department of the Navy in 1909. In 1913 Hébert was invited to demonstrate his natural method at the International Congress of Physical Education in Paris.[9,10] In the same year, as a result of the generosity of the Marquis de Polignac (1880-1950), the first model physical education institutions of Europe, *Collège d'Athlètes*, opened its doors in Reims.[11,12] Close cooperation with Georges Demeny, who in 1914 had been put in charge of the human performance laboratory,[13] resulted in a ready acceptance of the natural method by the public schools and other institutions in that area.[14] In 1914, shortly after the outbreak of World War I, Hébert was severely wounded. After his recovery, two years later, he was charged with the over-all supervision of the physical education program for the 4th Army, where he applied his natural method to the conditioning of the troops. In 1916 the French government instituted a new training program at the Physical Training Institute of Joinsville which included the more important features of Hébert's natural method. Published as the *Méthode Française* by the Minister of War it received the endorsement of the Minister of Public Instruction in 1925.[15]

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* A visit to the United States enabled him to observe the organization of athletics.[7]

[2] *Ibid.*

[3] Carl Diem, *Weltgeschichte des Sports und der Leibeserziehung* (Stuttgart: Cotta Verlag, 1960), p. 876.

[4] André Schlemmer, "La Vie de Georges Hébert," *L'Education Physique par la Méthode Naturelle de Georges Hébert* (Numero Special, 1958), pp. 8, 22.

[5] Diem, *op. cit.*, p. 877.

[6] Vuillemin, *op. cit.*, p. 22.

[7] Schlemmer, *op. cit.*, p. 9.

[8] Bruno Saurbier, *Geschichte der Leibesubungen* (Frankfurt: Wilhelm Limpert, 1963), p. 182.

[9] Georges Hébert, *Leçon-Type d'Entrainement* (Paris: Librairie Vuibert, 1925 [1st ed. 1913]), p. 211.

[10] Schlemmer, *op. cit.*, p. 8.

Concerned with a purposeful physical education program for women and children, Hébert had opened his first *palestre* (institute for natural physical education for women and children) in 1916. In the period immediately following the termination of the war he spent most of his energies on creating more *palestres* and on the development of their programs. In 1922, on the insistance of his friends, Hébert resumed his efforts to publicise the natural method. This time directing all his efforts to educators, Hébert assumed the editorship of *l'Education Physique*, a journal devoted to scientific and critical analyses of physical education. In addition he published a series of articles in which he redeveloped and refined the concepts of his natural method. Although Hébert was involved in the development of physical education programs and facilities for industry he spent most of his efforts on the completion of philosophy of the *méthode naturelle*. Little by little Hébert's method was incorporated by the public and private schools of France. Never, however, was Hébert called upon to serve in any capacity that might have given direction to a national physical education program. As a result a kind of hybrid program developed which either exhausted or annoyed the pupils.[16]

During the German occupation of France some overtures were made to involve Hébert in the administration of the physical education program of the Pétain government. Hébert declined, however, and concentrated on his writing.

Hébert's publications span a period from before World War I until after World War II, and, save for concessions to the modern concepts of education, Hébert did not alter the basic concepts of his philosophy. French publications[17,18] and others[19] attach great importance to the early influence of Hébert's contributions and feel, contrary to Van Dalen, Mitchell and Bennett[20] that Hébert's efforts must be regarded as significant in the development and reorientation of the physical education program in France. The High Commissioner of Youth and Sports, Maurice Herzog, stated:

> The natural method, already widely practiced by our educators, offers in the actual conditions of life, important contributions for the physical and moral development of youth.[21]

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[11] Diem, *op. cit.*

[12] Vuillemin, *op. cit.*, pp. 22-23.

[13] J. M. J. Korpershoek, "Lecture Notes at the Academy for Physical Education" (Amsterdam, The Netherlands, 1943-1947).

[14] Vuillemin, *op. cit.*, p. 35.

[15] *Ibid.*, p. 10.

[16] Schlemmer, *op. cit.*, p. 10.

[17] Maurice Herzog, "Editorial, *L'Education Physique par la Méthode Naturelle de Georges Hébert*" (Numero Special, 1958), p. 5.

[18] Schlemmer, *op. cit.*, p. 8.

[19] Diem, *op. cit.*, p. 22.

[20] D. Van Dalen, E. Mitchell, and B. Bennett, *A World History of Physical Education* (Englewood Cliffs: Prentice-Hall, 1956), p. 286.

[21] Herzog, *op. cit.*

Mayer[22] even goes so far as to suggest that the moon landing of Armstrong and Aldrin is as much a tribute to Jules Verne, who had the idea of the flight, as to Georges Hébert who had the vision of the physical and moral training necessary to make the flight successful.

PRINCIPLES OF THE METHODE NATURELLE

In the introduction of his *Guide Pratique d'Education Physique* Hébert stated:

> Our main thought . . . has been the composition or more precisely the codification of a method, a practical system which would allow us to reach the ultimate goal of education, complete physical perfection through means which we judge most effective, most rapid and most simple.[23]

Hébert indicated that the aims of the *Méthode Naturelle* could be comprised in a simple formula "*Beauté, santé, virilitié, adresse*"[24] meaning beauty, health, strength, and skill. In his program of physical activities Hébert did not propose to develop a series of entirely new, special or different exercises because, in his opinion, man's daily existence offered enough forms of natural exercise.[25] He regarded as most common, and therefore, most important, those activities concerned with displacement and locomotion and distinguished three principal classifications:

1) *The Essential Part*, consisting of eight groups of exercises which were called *utilitaires indispensables*. They included activities such as marching, running, jumping, swimming, climbing, lifting, throwing, and self defense through natural means.[26,27]
2) *The Preparatory or Accessory Part*, which included activities that applied to various parts of the body and which consisted of simple movements and their combinations requiring the use of the arms, legs and trunk. They included such activities as hanging, supporting, balancing, hopping and skipping, breathing exercises and the *quadrupédie*. The latter comprised a group of exercises which involved the use of all four limbs.[28]
3) *The Complementary Part* which included games, sports and various kinds of uncomplicated manual labor.[29]

The Principle of the 'Homme Fort'

Hébert indicated that sole physical labor would not constitute realization of "complete physical perfection."[30] He indicated that the ideal of physical education should be represented by the *Homme Fort*. This "strong man" should be strong both physically and mentally in order to be able to overcome and surmount, through his individual qualities of skill, power, speed, and stamina, the decay and physical obstacles of his modern culture. True to this maxim Hébert admonished the younger generation: "Soyez forts: Les faibles sont des inutiles où des lâches."[31,32]

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[22] Denise Mayer, "La Méthode Naturelle et les Astronautes," *L'Education Physique*, #58 (September, 1969), p. 2.

[23] Georges Hébert, *Guide Pratique d'Education Physique* (Paris: Librairie Vuibert, 1952, [1st ed. 1907]), p. 5.

[24] Georges Hébert, *L'Education Physique Raisonneé* (Paris: Vuibert et Nony, 19___, before 1917), p. 16.

[25] Hébert, *op. cit.*, p. 6.

[26] *Ibid.*

[27] Georges Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, *Exposé Doctrinal et Principles Directeurs de Travail* (Paris: Librairie Vuibert, 1963), p. 32.

[28] Georges Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume III, *Technique des Exercises, Fascicule I: Quadrupédie* (Paris: Librairie Vuibert, 1943).

[29] Karl Gaulhofer and Margarete Streicher, *Naturliches Turnen I.* (Vienna: Verlag fur Jugend und Volk, 1949 [1st ed. 1931]), p. 7.

[30] Hébert, *Guide Pratique d'Education Physique*, p. 4.

In order to achieve this ideal state Hébert suggested that a program of natural hygiene should accompany the physical activity program as it would add meaning and purpose. The *Hygiène Naturelle* properly enforced would require such factors as:

1) A sufficient amount of daily physical labor;
2) Hardening conditions, this is exposure to heat, cold, sun and rain;
3) Maintaining constant sobriety or returning to more natural primitive conditions; and,
4) Developing organic resistance.[33,34]

This reunion of natural exercises and natural hygiene, Hébert suggested, would result in an integral physical, moral and manly development.[35,36] In order to arrive at this he proposed a program of four-fold action:

1) *Functional Action*—aimed at the large vital functions (circulatory, respiratory and digestive);
2) *Structural Action*—obtained through practicing of the bone structure (suppleness in the joints and postural correction) and of the musculature (aesthetic or plastic results);
3) *Utilitarian Action*—intended to furnish purpose to and preparation for the true activities of daily life;
4) *Moral and Psychological Action*—designed to influence character forming, to generate manliness and to cultivate the noble sentiments (honor, charity, cooperation, etc.).[37]

The proper correlation of these actions would lead to the development of morally strong (courage, energy, tenacity, and composure) and physically strong (a perfect state of health and functioning of the body) men and women who would be able to pair organic perfection to the physical qualities of speed, power, stamina and skill.[38]

The "Travail Naturel"

Hébert regarded the *Travail Naturel* (natural labor) as a synthesis of natural activities and fundamental exercises. He indicated that in its systematic application natural labor should primarily be concerned with those innate activities which applied foremost to the natural qualities of the performer or, as he called it, to his *Fond* (foundation), meaning his organic functions.[39] This systematical application should furthermore be concerned with the technique of the performance and should be aimed at perfection of the movement form, or, in the case of sport, with style. Hébert called these forms the *Travail Foncier* (fundamental practice)[40] and

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[31] *Ibid.*, pp. 15-16.

[32] Georges Hébert, *La Culture Virile* (Paris: Librairie Vuibert, 1941 [1st ed. 1913]), p. 152.

[33] Georges Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur* (Paris: Librairie Vuibert, 1918, [1st ed. 1913]), p. 17.

[34] Vuillemin, *op. cit.*, p. 24.

[35] Hebert, *Guide Pratique d'Education Physique*, p. 1.

[36] Georges Hébert, *Leçon-Type d'Entrainement* (Paris: Librairie Vuibert, 1925 [1st ed. 1913]), p. 16.

[37] Georges Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, pp. 37-38.

[38] *Ibid.*, pp. 38-44.

[39] Vuillemin, *op. cit.*, p. 27.

[40] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, p. 32.

the *Travail Technique* (practice of technique)[41] and indicated that in practical situations they would cooperate closely, pairing strength and skill in their search for optimum performance.

For the practical application of his program of physical education Hébert distinguished two forms:

1) The *Séance de Travail* or practice session. Here the performer should practice on an individual basis.
2) The *Leçon* or instructional situation. This could be either a collective or an individual instruction period but had to be under supervision of a *moniteur* or teacher.[42]

Hébert indicated that, regardless of the situation, the practice sessions should always employ activities of the category of natural labor only. [For cohesion of the discussion it will be necessary to interject some mention of activities and facilities. However, this will be only fragmentary; proper discussions of both will follow later on.]

Hébert advocated that the practice sessions should always take place on a *parcours* (obstacle course) or at a facility which should be rather long in dimension and where one could

> . . . March, run, jump, practice the *quadrupédie*, climb, scale a wall, traverse with an unstable equilibrium [balance beam, etc.], lift and carry, throw, wrestle, swim . . . as a realistic reproduction of a figurative representation of a hunting expedition or the search for food in the wild open nature.[43]

This type of facility could be arranged as (1) a *Parcours* in the countryside, which would correspond with the essential requirements of the natural method, or as (2) a *Plateau* or practice place, a confined area which organization had been arranged in a special manner in order to utilize all available space in a particular way.[44, 45]

The Seance de Travail

This instructional period could be executed in two fashions:

Séance de Travail Elementaire où Primitive—This primitive or elementary form aimed at producing natural performances without any other worry than the accomplishment of natural exercises such as walking, running, jumping, etc.[46]

Séance de Travail Méthodique et Raisonnée—In this instance the rules of pedagogy were to be followed to the letter and predetermined goals were set for physical improvement.[47] This manner of performance deserves particular attention as it employed a more defined methodology.

Hébert distinguished three different aspects of character in the *séance de travail:*

1) *A Caractère Foncier* (basic aspect)—This was the most common one in which the innate qualities of the individual were developed. During the session it dealt particularly with producing labor in order to involve the large functions (circulations, etc.) without worrying too much about the technique.[48]

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[41] *Ibid.*, p. 33.

[42] Hébert, *Guide Pratique d'Education Physique*, p. 11.

[43] Vuillemin, *op. cit.*, p. 28.

[44] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Miniteur*, p. 3.

[45] Vuillemin, *op. cit.*, pp. 17-18.

[46] Hébert, *Guide Pratique d'Education Physique*, pp. 12-13.

[47] *Ibid.*, p. 21.

[48] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, pp. 48, 66.

2) A *Caractère Technique* (technical aspect)—Here a particular movement technique during the performance of the exercise was aimed at. Hébert indicated that this development of style was to be employed only sparingly.[49,50]

3) A *Caractère d'Entrentien* (aspect of maintenance)—This aimed at the maintenance or up-keep of the physical condition of the performer.[51,52]

The Méthode Naturelle utilized three forms of instruction in the application of the *séance de travail:* (1) The *Leçon* or instruction period which was mainly concerned with the teaching of the general program. This took place either at the obstacle course or at the *plateaux* or involved a combination of the two;[53] (2) The *Séance d'Etude* or practice session which permitted more intense practice of a certain group of exercises. Although primarily aimed at specialization Hébert insisted that it would always incorporate a certain amount of *travail foncier* (basic exercises) in its program;[54] and, (3) The *Séance Mixte* or varied session which consisted of an instruction period in which more emphasis was put on a certain group of exercises without giving it the aspects of specialization.[55]

Development of the Lecon

Execution of the *leçon* as well as of the practice session were to respect certain principles and rules which had been derived from the philosophy of the *Méthode Naturelle.* Two basic concepts were:

1) Freedom of action which allowed each performer to utilize his own means in his own individual rhythm during the lesson; and

2) A natural style which contrary to the conventional methods of physical education in France allowed and encouraged an individually natural form of movement rather than requiring a uniform manner of performance.[56]

Hébert indicated that the organization of the instructional period should heed closely the following factors in order to realize the concepts of the natural method.

1) *Continuity*—The continuity of performance, which did not permit breaks or pauses to occur during the activity period, corresponded with the concept of *soutenu et continu* which demanded a sustained and continuous activity on a part of the performer.[57,58,59] Consequently the lesson period should never present an opportunity for any of the participants to be inactive but should consist of a chain of various activities, one leading into another, thus forming a continuous unit. Hébert believed that only this continuity could promote a concerned effort of the vital organs.[60]

2) *Progression*—Hébert considered progression an important factor for, if properly administered, it should enable the body to warm up gradually, thus conditioning it for the demands of the more strenuous requirements of activities to follow.[61] In the construction of his lesson plans Hébert required warm-up activities

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[49] *Ibid.*

[50] Vuillemin, *op. cit.*, p. 29.

[51] Hébert, *Leçon-Type d'Entrainement*, pp. 22-23.

[52] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, pp. 48, 66.

[53] *Ibid.*, p. 51.

[54] *Ibid.*, p. 52.

[55] Hébert, *Leçon-Type d'Entrainement*, pp. 28-33.

[56] Vuillemin, *op. cit.*, p. 19.

[57] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, p. 4.

[58] Hébert, *Leçon-Type d'Entrainement*, p. 7.

[59] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, p. 83.

[60] Hébert, *Leçon-Type d'Entrainement*, p. 14.

[61] Hébert, *La Culture Virile*, p. 144.

to guarantee effectation of optimum temperature. This phrase was to be followed by combinations of various exercises or activities which gradually and progressively increased the taxing of the vital functions. After reaching the highest degree of intensity (approximately ¾ of the period) the lesson was ended with a period of *apaisement* which regulated a return to a more normal condition.[62] The lesson was then concluded with a session of marching and singing. The *soins hydrique* (water care) or *ablutions* (washings) had automatically become an integral part of the finishing-up procedures.[63,64]

3) *Alternation*—To permit a "breather" between the more vigorous activities, the natural method alternated the intensity of the efforts through:
    a. Rhythm—Here less vigorous activities follow the more intensive ones; *effort et contre-effort.*
    b. Variation of activity—The practice of a strenuous activity (e.g. jumping) was followed by participation in a less strenuous one (e.g. balancing).
    c. Variation in application to different parts of the body—Alternating activity of the upper and lower extremities and variation of different muscular synergies (e.g. climbing and jumping, throwing and carrying, etc.)[65,66]
4) *Proportionment*—In order to obtain the best possible achievement of the pupils at a particular moment it was necessary to be informed of their ability and to assign corresponding exercises and activities. Where the teacher was considered the sole judge of the possible capacities of his pupils and where in a class situation it would be almost impossible to adapt the lesson to individual needs, he must, in the organization of his lesson, aim at the average ability of his class. Hébert indicated that the following factors should be taken into consideration in composing the lesson plan:
    a. Sex and age of the pupils,
    b. General physical condition,
    c. Degree of strength or training experience,
    d. Contributing factors (amount of physical labor performed outside school hours),
    e. Weather conditions and temperature,
    f. Conditions of facilities and equipment.[67,68,69]
5) *Attractiveness*—In order to achieve the best possible results, it was deemed necessary to obtain the full cooperation and interest of the pupils. It was, therefore, of great importance to administer the lesson in such a manner that the pupils would be eager to participate and give their utmost effort, rather than arousing negative attitudes.[70]
6) *Organization*—To facilitate the incorporation of desirable elements into a lesson plan, Hébert proposed the following framework:
    A. *Prise en main* or a preparatory warm-up consisting of marching, singing or calisthenics,

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[62] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, p. 9.

[63] Hébert, *Leçon-Type d'Entrainement*, p. 2.

[64] Vuillemin, *op. cit.*, p. 20.

[65] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, p. 5.

[66] Hébert, *Leçon-Type d'Entrainement*, pp. 9, 17.

[67] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, pp. 5-11.

[68] Hébert, *Guide Pratique d'Education Physique*, pp. 14, 20.

[69] Hébert, *Leçon-Type d'Entrainement*, pp. 20-22.

[70] *Ibid.*, p. 30.

B. *Mise en Train* or the real warm-up to prepare for the regular lesson. This consisted of a three minute period of activities such as marching and courses *envolées* (stop-and-start running) around the *plateau*, exercises for coordination, stretching exercises, and exercises with light implements, all designed to bring the performer to an optimum temperature.

C. *Dérouillement Normal* or normal procedure which comprised the core of the lesson and provided activities and exercises such as: *Quadrupédie*, climbing, jumping, balancing, throwing, lifting and carrying, assault and defense, timed obstacle race (swimming).[71,72,73]

D. *Apaisement* or quieting down exercises.[74]

The Programme du Travail

Hébert distinguished two different programs of physical education: (1) A *programme d'entrainement* or a program of regular training aimed at a progressive improvement of performance and (2) a *Programme d'entretien* or a physical fitness program aimed at maintaining a satisfactory physical condition. In order to guarantee a well balanced program which might assure a good physical condition, Hébert suggested the *Programme du Travail* which was a year round program divided into three parts:[75]

1) *Une période d'entrainement généralisé*—a conditioning period to reach the desired level of performance, lasting 12-20 weeks for children, 16-24 weeks for adolescents, and 3-6 weeks for adults.
2) *Une période d'entrain*—to maintain the level of performance reached in the first period, and
3) A third period devoted to any physical activity or sport of choice. Periods two and three were of equal length and made up the remainder of the year after completion of the first part.

Exercise Material

Hébert was very particular about the composition of the individual lesson. He therefore stipulated that each lesson should have a *dominante principale*, or chief aim, and a *dominante secondaire*, or subordinate goal.[76] The *dominante principale* was rigid and determined the purpose of the lesson. This could either be the development of fundamentals or the maintenance of the present physical condition. The *dominante secondaire* was more flexible and might vary with each lesson. It might stress subordinate goals or accentuate particular elements of the goals pursued and might, consequently, detemine therefore, the type of each individual lesson. It might stress such qualities as: (1) correction of posture, (2) speed, (3) fine motoric functions, (4) recreation, (5) style (economic or aesthetic) and (6) courage and manliness.

FACILITIES FOR THE METHODE NATURELLE

Plateaux du Travail

Hébert indicated that the ideal lesson should be presented in natural surround-

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[71] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, p. 2.

[72] Hébert, *Leçon-Type d'Entrainement*, p. 2.

[73] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, pp. 10, 52.

[74] *Ibid.*, p. 90.

[75] *Ibid.*, p. 118.

[76] *Ibid.*, p. 62.

ings, where the terrain might provide natural conditions for various activities such as hiking, running, climbing, jumping, etc. Because such natural obstacle courses were very seldom available, Hébert was obliged to re-create natural conditions artificially. These practice facilities were called *Plateaux du Travail* (practice areas).[77] They generally consisted of a grassy area or plateau primaire, bordered with equipment [bars, ropes, balance beam, scaling walls], vaulting and jumping pits and a track, which together were called the *plateaux secondaires*.

Customarily the pupils were divided into several homogeneous squads called *vagues* (wave) which moved from station to station. This operation aimed to facilitate compliance with the requirements of continuity, progression, alternation, proportionment, and attractiveness. Although the exercise material for all squads remained the same, factors such as intensity, height, weight, distance and so on were adapted to the skill and vigor of the individual squads.

Le Parcours

Most realistic in its approach and corresponding closest with the principles of natural education was the *leçon en parcours* or workout in natural surroundings.[78,79] This lesson was conducted in a fashion similar to circuit training in which the elements of the *Méthode Naturelle* had been incorporated. Hébert considered it more effective than a session at the *plateaux du travail* and distinguishd: the *Parcours Rustique*, a cross-country course through unknown terrain which offered a diversity in contours and natural obstacles,[80] and the *Parcours Reconnu*, a course which had been prepared and which had been equipped with natural and artificial obstacles.[81]

Arrangement and procedures of the practice sessions were similar to those at the *plateaux*.

L'HYGIENE NATURELLE

In stressing the importance of harmonious education Hébert indicated that rigorous training and exercising would be of no value educationally if the participants did not at the same time observe the *moralité physique*. By efficient organization of their programs, the instructors could promote proper training of the organic functions, supply ample skill practice, and control the general health habits and health precautions that formed part of their program (baths, showers, uniforms, adaptation to climatological conditions).[82,83] However, they would not be able to guarantee a *résistance organique* (organic strength), as this was dependent on the *résistance général* (total strength). Hébert indicated that the latter could be achieved through the practice of clean living and suggested following rules of conduct:

> Have a daily workout, push yourself to the limit of healthful fatigue and, if possible, combine it with natural (unheated) baths in the open (air, water, sun) and with sunbathing;
> Always practice out-of-doors nude (or almost);

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[77] *Ibid.*, p. 288.

[78] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, p. 21.

[79] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, p. 31.

[80] *Ibid.*, p. 313.

[81] *Ibid.*, p. 312.

[82] Hébert, *Leçon-Type d'Entrainement*, p. 125.

[83] Hébert, *L'Education Physique—Virile et Morale par le Méthode Naturelle*, Volume I, p. 444.

Respect hygiene in all its forms: Physical hygiene: showers, baths, care of the skin; Nutritional hygiene: frugality and temperence; Hygiene of living: regular life, steady nerves, relaxation; Renew the fight against extremes and contrasts; and Search for nature in all its forms (cold and hot [weather]).[84,85,86,87,88]

ACHIEVEMENT TESTING

In order to develop in the performer a desire for improvement, Hébert encouraged self-competition through self-testing and self-evaluation which he called *auto-emulation.*[89] He suggested the following procedures for testing and measuring:

1) *Comparison*—A periodic check of results to evaluate progress,
2) *Achievement Tests*—Selected exercises were scored and graded by means of standardized performance tables,
3) *Obstacle Tests*—Timed performances on an obstacle course. They did not indicate the performance of individual feats but were considered good indicators of total performance, endurance, determination and stamina,
4) *Measurement*—This procedure was regarded as an indicator of structural growth only, which, although not necessarily an indicator of physical strength, often served as a stimulant for further practice.[90]

Hébert noted that the standardized testing procedures seemed to be most satisfactory as it was easier to administer and because of its reliability. [They had been established after ten years' compilation of data].[91] In his opinion they established *"la force"*: *"Vitesse, Adresse, Resistance et Force Pure"* (speed, skill, stamina and pure strength). His [1909] *Fiche d'Epreuve*, or standard test, consisted of twelve parts:

3 Running tests:	1 sprint, 1 middle distance, 1 long distance;
4 Jumping tests:	1 standing high jump, 1 running high jump
	1 standing long jump, 1 running long jump;
1 Climbing test;	
1 Throwing test;	
1 Lifting test;	
2 Swimming tests:	1 swimming and 1 diving test.[92]

In order to arouse interest and to establish a record of the pupils' individual performances Hébert instituted *Fiches Individuelles*, or individual performance charts.[93,94]

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[84] Hébert, *Guide Pratique d'Education Physique*, pp. 41, 44, 46.

[85] Hébert, *Code de la Force* (Paris: Librairie Vuibert, 1947, [1st ed. 1911]), p. 17.

[86] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, pp. 17, 20.

[87] Hébert, *Leçon-Type d'Entrainement*, pp. 24, 25.

[88] Georges Hébert, *L'Education Physique Féminine—Muscle et Beauté Plastique.* (Paris: Librairie Vuibert, 1919, [1st ed. 1919]), p. 36.

[89] Hébert, *L'Entrainement Physique Complet par la Méthode Naturelle—Guide Abrégé du Moniteur*, p. 22.

[90] Hébert, *Code de la Force*, pp. 16-18.

[91] Schlemmer, *op.cit.*, p. 80.

[92] Hébert, *Code de la Force*, pp. 20, 96.

[93] *Ibid.*, p. 120.

[94] Hébert, *L'Education Physique Raisonnee*, p. 175.

SPORTS, GAMES AND MANUAL ARTS

In his *Code de la Force*, a manual for the military, Hébert interpreted sport as an activity in which the aim was the combat of a previously defined challenge: distance, time, obstacle, difficulty of performance, danger, animal, adversary or oneself. He regarded it as a transformation of the acts of war and valued them as educative means only if they were of a utile purpose.[95,96] The *esprit sportif** he regarded as "a forever quest of effort for effort's sake, action for action's sake; a desire to do always better, to obtain ever brilliant results."[97] Hébert warned against exaggeration stressing that:

> Bodily exercise is a means to improve ourselves physically and in a manly fashion. If its function is altered . . . it does not fulfill the same requirements any longer and conceiving it in this manner is contrary to the aim which we pursue.[98]

Later in the *Guide Pratique d'Education Physique*, in which Hébert outlined his natural method as a method for education, he revised this attitude slightly and listed the following qualities of sports and games as educationally worthwhile:

1) Augmentation of the general physical condition,
2) Providing for the task for activity by breaking up the monotony of methodical exercises,
3) Perfection of skill, development of a practical sense, creations of ingenuity by permitting complete freedom of individual action,
4) Satisfaction of the need for variety and pleasure . . . , and
5) Realization of the usefulness and advantage of possessing a well prepared physique. . . .[100]

Save for a publication written in 1925 in which Hébert warned against the excesses of specialization and commercialism in sports *(Le Sport contre l'Education Physique)* no references have been found which indicate a more thorough examination of this facet of physical education. Hébert indicated that it had not been possible to practically include a discussion of sports, games and manual arts in his *Guide Pratique* other than the following limited classification:

Games: 1) *Petits jeux simples* (small, simple games),
2) *Grands jeux ou Jeux de plein air* (large field games),
3) *Jeux nautiques* (water games).
Sports: 1) *Sports utilitaires* (useful sports, military games, flying, etc.),
2) *Sports de fantaisie, d'agrément ou de luxe* (hunting, fishing, mountain climbing, dancing, etc.).[101]
Manual Arts: About these Hébert had not much to say other than that they developed skill to handle simple tooks and that they concerned tasks of a general nature such as:
1) Gardening,
2) Carpenting,
3) Metal working.[102]

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* Hébert indicated that he received his first inkling of the value of the *esprit sportif* during his role of observer during the Spanish-American War in 1898. Judging the military training of the Spanish equal to the French but superior to the American he marveled at the sportive element that the Americans seemed to be able to introduce (and to their advantage) in a previously considered exclusively formal training.[99]

[95] Hébert, *La Culture Virile*, p. 96.

[96] Hébert, *L'Education Physique—Virile et Morale par la Méthode Naturelle*, Volume I, p. 21.

[97] Hébert, *La Culture Virile*, p. 104.

[98] *Ibid.*, pp. 116-117.

[99] *Ibid.*, pp. 13, 16.

[100] Hébert, *Guide Pratique d'Education Physique*, p. 497.

[101] *Ibid.*, pp. 499-504.

[102] *Ibid.*, p. 504.

CONCLUSION

At present it is still difficult to assess the influence that Hébert's efforts may have had or still may have on French physical education. The professional literature of France has not been very informative about the direct causes that prevented Hébert from assuming the leadership of French physical education. Three main causes have been indicated to explain the situation: (1) The traditional jealousy between the branches of the armed forces which prompted the army to adhere to the classic Swedish system; (2) The opposition of the physician Philippe Tissié (1825-1935), a proponent of the Swedish system; and, (3) The interim of the German occupation during the second World War which created unacceptable conditions for Hébert to assume a leading position. This development in France, or rather the lack of development between the two world wars, is even harder to understand if one considers that in almost all other countries of Western Europe physical education was subject to great reforms, all of which were directed to a greater individual freedom of expression and abandonment of the traditional, formal, or military methods.

Most prominent in this renewal of physical education were the methods of natural physical education developed by the Austrians, Gaulhofer and Streicher, and the efforts of the Swede, Thulin. Without embarking on a comparison of the merits of both methods it should be noted that at the time neither the method nor Hébert's concepts received much consideration in France. In a heated polemic about the originality of the natural method of physical education which involved most of the European physical educators, Hébert's name never entered the discussion.[103] Professional jealousy may have been the cause that Hébert never referred to the Austrian development which swept Europe. It is extraordinary though, that the present French exalters of the *méthode naturelle* list Hébert with such notable educators as Rousseau, Claparède, Decroly, Montessori, and Dewey but fail to mention Gaulhofer and Streicher.

Critics of Hébert have asserted that his methodology does not correlate with the requirements for naturalness of his philosophy. Some of the arguments brought forward are:

> The program is directed toward physical training, rather than to physical education,
> The method aims at mass performance rather than at individual participation,
> Adaptation to the needs of sex and age should be achieved through differentiation of exercise material rather than through degree of dosage of activity,
> Personal attention and observation of the individual needs are practically impossible due to the constant high tempo of performance and the widespread distribution of participants over the *plateau du travail*,
> Games and play are almost non-existent in the program, this because the degree of effort could not be prescribed,
> The method is materialistically oriented rather than contributing to pedagogical goals.[104]

Recent publications give evidence that there is a renewed interest in the concepts of the *Méthode Naturelle*. Sustained by the French Federation of Physical Education which has committed itself to the concepts of the Hébertian philosophy, Hébert's disciples are perpetuating the cry:

ETRE FORT POUR ETRE UTILE

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[103] Gaulhofer and Streicher, *op. cit.*, pp. 188-189.

[104] K. H. Van Schagen and J. P. Kramer, *Historisch Overzicht van de Lichamelijke Opvoeding* ('s Gravenhage: Nijgh and Van Ditmar, 196___), pp. 166-170.

Mission, Omission and Submission in Physical Education

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At the eve of New Year's, one tends to get nostalgic. It is a time for resolutions. How much more so at the eve of a new decade.

Except that this time, this paper, instead of enunciating future promises for which no one can be held responsible, is a declaration of indictments.

Indictments of the conduct of the field of physical education, past and present. This is observable, analytical and also measureable.

Let those among us who have been dedicated to the "cause" or see themselves as such not get alarmed. Let them be vindicated, but it purges not the field itself, the *collective* conduct as reflected by what we do and what we say. Behavior exhibited by thousands and thousands of teachers coast to coast; teachers who are *our* product. They have all been in our classes.

So, we begin with us. We begin with Teacher Education, that branch of the academic world which is responsible for many of the inadequacies and agonies in our classrooms and gymnasia.

Do not cringe, do not sit in righteous indignation, do not despair—time has come for *us* to look at *ourselves* with boldness, frankness and even with what seems to be momentary cruelty. It is quite obvious that we cannot continue on this path, in this direction, and in this manner.

The target of this paper was identified, the direction clear. Now, the spirit of the paper. The title: Mission, Omission and Submission in Physical Education is not a mere organizer dividing the statements into clear compartments; rather it represents the very essence of the tragic failure of a field intrinsically laden with great potential.

So—Mission, Omission and Submission guide the spirit of this statement. A statement intended to serve as a position paper; an invitation for written and oral dialogues concerning the conduct of the field today! The conduct of so turgid a field, a field so proud of being a mirror of society—a mirror that reflects *SELECTIVE* images adorned with the halo of myths and attributions. A field that, like a carrousel, is going around and around to the monotonous syncopations of tinny sounds, and slowly lulling its riders into a pleasant, dreamy world of semi-consciousness.

But let me not lull you into the carrousel syndrome. Let us examine what we in fact have created and have been teaching to teachers.

Historically, physical education might best be depicted as a mass of pliable, pulsating, chameleon material whose inherent behavioral characteristic is to latch on and/or absorb other bodies. This mass lacks an independent internal framework which would give it recognizable shape and structural strength. As a result of its structural deficiency, the mass is susceptible to being manipulated and reshaped by external forces. These forces could be congruent with and friendly to the mass, but they could also be incongruent with, alien to or vested invasions of the mass's environment. As a result of its deficiencies, the mass has developed a weak frame of reference and so it is unable to clearly detect the intentions of the exerting force. It even has more difficulty resisting and rejecting the shaping forces because the mass itself is constantly searching for its own identity. It looks to the forces to fulfill a need. A need to strengthen a nebulous image. In its search for an identity, it actually seeks out, readily acclimates, basks and coos in the warm hands of its manipulators. It has been cajoled and deluded into feeling it has some worth because it has received a little "lovin"—(an identity stroke)—from some external force.

The mass is functionally blinded and fails to see or comprehend that this very characteristic of extreme dependency is what leaves it open for attack. Attacks from *all* structures which possess internal frameworks or social status. Its behavior is outmoded, stagnating and potentially self-consuming. The mass is living —but—in an indifferent and sometimes hostile environment. It is in limbo because it has adapted with such frequency and intensity that it is now unable to select ally from foe—good from bad—living from dying.

Unless it is willing to submit to an internal examination and maybe to a major operation, the mass will take on an even less significant form. If it accepts the examination but the changes do not make it more compatible with its environment, it will continue to operate in vain. Eventually it will be consumed by its own ineptness. Even its own offspring and its shaping forces will help to devour the mass.

In other words: THE MASS IS A MESS.

How did it happen? Can we identify the contributing factors? Are we ready to analyze? Can we analyze without vested hangups? Can we accept that it is theoretically possible that all must go? If not all, then what goes, what stays and what is added?

These questions and others must be asked and their answers must become clear in the minds of the designers. For it will be those designers who will be able to give it a framework, one with a distinguishable shape, structural-strength, internal consistency and a vibrant self-image.

This process of redesigning cannot afford to be a replay of the way physical education evolved up to now. Original attempts to identify (what it is?) resulted in the transplanting of a number of structural instances and/or ideologies that were developed in other social arrangements. None of the existing recognizable structures were entirely acceptable to the new environment. It resulted in the selection of bits and pieces of various structures and they were attached to each other to form a different structure. The resultant product had internal inconsistencies and inherent environmental conflicts. It was open for attack and attack they did.

These attacks left additional uncertainty and some voids. This allowed people, as individuals or as collective bodies, to decide what should fill the empty spaces. It resulted in a precedent which said that it's all right to develop one's own idiosyncratic bag.

Most of the innovations in our field have been primarily "a little bit of this and a pinch of that." This means it continues to be morally and ethically correct for anyone to devise personal and indigenous formulas (recipes) based on their rationale. What makes it even more peculiar is that this personal product is usually very difficult to challenge because who is to say their rationale is any less valid than those which presently exist.

The plight of not having an internal framework or consistency is augmented with other problems such as: 1) the discrepancy between what the academic world sees as important and what physical education sees; 2) between what education says should happen and what really occurs in the gymnasiums of America; and 3) the continued attacks on physical education and its affiliates by various social agencies and/or prominent people. This has resulted in the development of a weak professional image.

The uncertainty that goes along with a weak image has produced a number of pressures, anxieties, fears, frustrations, threats to the profession (individually and collectively). It has caused a professional "neurosis" and has resulted in an elaborate system of emotional and professional defense mechanisms.

The professions compensating behavior seems to have taken on the tone of trying to be all things to all people. This identity search has resulted in physical education embracing a number of "Odd Bedfellows." Their relationship seems to be explained and approved in three ways: 1) justification by association; 2) justification by absorption or proliferation; 3) justification by uniqueness.

Justification by association is an identity-seeking technique which is supposed to allow this profession to shine a little brighter because it reflects the light given off by an established, accepted discipline or profession.

Physical educators are not physicians, psychiatrists, psychologists, sociologists, biologists, physiologists, and/or para-medical people, not by training, not by knowledge and not by function. Each of the above professions has a function in our society which is unique to them. Just because we should and do utilize their knowledge does not make us psuedo (anythings).

Physical educators are not religious leaders, military trainers, fashion designers, policemen, or judges and therefore, the profession's preoccupation with rigid imposed standards regarding personal appearance, ideas, interests, aspirations and/or abilities does not give it a more legitimate image. Teachers must become sensitized that uniforms, cut of clothes, haircuts, facial hair, beliefs, likes, dislikes and ones motoric contribution to a selected environment are not the criteria by which you judge people and their worth to society.

Physical educators are not athletic coaches, athletic trainers, recreational leaders, or athletic officials. The essence of athletic competition and recreation are different and they have unique structures of their own.

Physical education may use similar tools, but how they are used should be the significant difference. This is not meant to imply that a person cannot act in a dual role, but rather that the professions *cannot* afford the luxury of the association. Athletics and recreation have the more clearly defined structures and have greater internal consistency. Therefore, they tend to influence and dominate physical education.

Justification by absorption or proliferation is another way that the profession has attempted to make their being more acceptable. This technique is to make one's self so large that you offer a formidable foe by size. Anyone who then decides to challenge it must be willing to challenge all that has been absorbed or proliferated. Today, it is almost impossible to challenge physical education without encountering God, the flag, the country, motherhood, purity, goodness and maybe even apple pie.

In the name of physical education, we deal with and profess expertise in such things as: military fitness training, presidential fitness training, during-class athletics and intramurals, during-class coaching, dating, marriage, sex, drugs, safety, first aid, athletic training, weight control, nutrition, biology, physiology, driver education, rhythms-dance, movement education, body builders, perceptual training, motoric development, etc. Is this what physical education is all about?

This absorption-proliferation process is diluting in itself, but we compound it with our preoccupation with such practices as:

1) Preservation of subject matter
2) Adherence to organizational patterns that were devised for a particular philosophy
3) Conformity to imposed requirements of uniforms, showers, pace, rhythm and other behaviors
4) Presentation of the "all knowing" authority figure around which the class pivots
5) Promotion of the concept of espirit de corps

6) The correct form, or way of doing it
7) Excusing from class members of athletic teams
8) Developing competitive climates, where child vs. child is the order of the day (which the spoils going to the winner and sometimes additional penalties for the loser)

These practices, as well as others, have placed this profession on record as seeing: subject matter instances above people, group needs above individual needs, group conformity above individual expression, group control above self control, authority decisions above self decisions and dependency above independence.

The entire profession continues to skate on thin ice when it tries to justify its being by sighting its uniqueness *(justification by uniqueness)*. What is it that is unique? Is it the subject matter, the child, the tools, the product, the medium, or is it really just the set of assumptions and attributions that make us different.

Couldn't other social agencies do exactly what we do? Isn't our being in the school setting the only really unique thing in this profession? Aren't we so much like several of the more dominant off-springs—athletics—recreation—physical skill training—that some other agency could and maybe should do it?

Certainly, at this juncture of the profession's development, one might legitimately ask, "What is physical education, in its present form, doing in the American public school?" This question is presently being asked by the academic world about college-university required physical education programs. When what is being done is compared to current educational theory and practices, the incongruencies become clear and any uniqueness becomes relatively unimportant.

This same question will be asked of elementary-secondary school programs and the future of physical education might not only depend on how we answer, but who asks the questions to initiate the process of change.

Is the future of this profession:

MISSION? OMISSION? OR SUBMISSION?

Let us examine further by identification of *Paradoxes* which not accidentally exist in physical education but *Paradoxes deliberately* perpetrated in the field. (The assumption of deliberateness provides for the existence of some rationale for the conduct of the field; if things have been happening in this field in a haphazard, nondeliberate way, then indeed, it needs high level scrutiny.)

PARADOX #1: PHILOSOPHY AND CURRICULUM

To repeat here "the philosophy" of physical education or even to attempt to quote a collection of re-worded objectives, aims, principles and the like would be to bore you and to insult my colleagues, the book writers, the reiterators of that assemblage of noble and nebulous statements fed to our undergraduates as purposes, as direction, as dictum.

Had our curricula remotely approximated the philosophy it would have been enough.

Had the curricula moved in *that* direction, it would have been enough.

But our curricula moves in the opposite direction to the philosophy stated.

This polarization can be illustrated by the following examples:

1) Generally speaking, the field of physical education in its *mission* statements has allied itself with the general objectives of American education. Objectives which proclaim "education of all and for all" as their pillar of strength and purpose.

When one examines the *practice* and the *programs* in schools, it becomes quite obvious that the *movement experiences* are *not* designed for all. In fact, they are *apriori* designed for *exclusion!* Exclusion, not inclusion, is the principle guiding the practices of experiences in American gymnasia. (For a detailed statement about inclusion and exclusion in physical education, see Mosston.[1])

Let us retell the story of the high jump used as an educational experience. The discussion here is not concerning the use of the high jump in athletic competition whose philosophy and practice are congruent in the use of the exclusion principle. We are examining the *design* of the high jump experience in light of the stated educational objective.

The horizontal arrangement of the rope (or bar) becomes after several "innings" an excluder of most participants. If the raising of the bar continues, it becomes an excluder of *all!* A rather incongruous design based on opposite philosophical statements.

The emphasis here is on the word *design*. We have designed it! We have been teaching this design to generations of teachers. We have caused millions of children to be excluded from this contributing activity.

Instead, let us examine an *alternative design*. Let us hold the bar *on a slant*, so that it will represent *variable* height with its *intrinsic quality* of *inclusion*. Experimenting with this alternative with children all over the country has yielded the following observations:

(a) *All children participate* [this *includes* children with various limitations—physical, perceptual, etc.].

(b) *All children participate* willingly [this arrangement accommodates the *motivation* to *begin!*]

(c) *All children experience success—frequent success.* [They *always*, let me repeat—they *always* begin where *they* know *they* can be successful.]

(d) *The availability of CHOICES in height always provides for mobility.*
[This arrangement accommodates for *Motivation* to *continue.*]

(e) *All children become engaged in competition*—in fact, they *discover* two kinds of competition, each with its asset and liabilities. They learn to *make decisions* for themselves in regard to *their* readiness to choose the *particular* kind of competition: competition against one's self and competition against another.

(f) *This arrangement never excludes the top performers.*

(g) *In summary—All children are always included!*

Multiply this example by a thousand and figure out the kind of programs we *could* have, had it not been for a deliberate *OMISSION!* [The issues of exclusion and pressure on children are treated in[2,3,4] Mosston[5] suggest that "every decision made by a teacher in every act of teaching has the consequence of inclusion or exclusion. These decisions serve as a powerful and sometimes irreversible antecedent to what actually *occurs* to the learner, *for* or *against* the learner."]

Mosston[6] further accuses physical education with the charge of mass exclusion when he states:

> "Our field of human movement intrinsically possesses and produces the quality of *high visibility*. The difference between those *who can* and those *who cannot* is quite apparent. The most indicting aspect of the *visibility factor* is its range of exclusion which potentially includes so many: the extreme somato-types, the handicapped, the unwilling, the racially different, and combinations of all these.

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[1] Muska Mosston. *Inclusion and Exclusion in Education-II* (Presented to a Symposium on Innovation in Curricular Design, University of Pittsburgh, February 1969).

[2] *Theory into Practice* (tip) (The Ohio State University: College of Education, Volume VII, No. 1, February 1968).

[3] Flemming and Doll, *Children Under Pressure* (Columbus, Ohio: Charles E. Merrill, 1966).

[4] Sol Gordon, ed., *Pressures that Disorganize in Secondary Schools* (New Jersey: Secondary School Teachers Association, 31st Yearbook, 1966).

[5] Mosston, *op. cit.*, 1969.

[6] Mosston, *ibid.*

Indeed, the physical educator, particularly the one who has been brought up with the professional myth of Greek standards of beauty, harmony and perfection, must learn to grapple with the reality of a pluralistic society and re-examine his notions of standards and norms."

2) Now, in addition to having been an apriori excluder of people, American physical education's curricula has been *intellectually dishonest*. The intellectual purpose of education in a free society is *to seek the truth* and *not to present scattered and carefully selected instances as the whole truth*. That means that any field of knowledge, any discipline seeks to discover and organize all of its *possible* instances into the *largest conceivable structure*. Then, and only then, the smaller parts, the *sub-structures* fall into place and can be used and taught.

The *primary* function of intellectual activity is to go beyond, to search for the unknown. This further means that decisions concerning the *FEASIBLE* and the *DESIRABLE* must be carefully weighed and often postponed when it comes to the inquiry into the structure of subject matter in a given curriculum.

Thus, intellectual honesty dictates that an *assembly of all possible responses and instances* would constitute the largest structure.

Any assembly of *feasible* responses and instances invariably represent a lesser structure or *sub-structure* (such as basketball, wrestling, gymnastics, etc.) due to *functional* limitations superimposed on the selective process. This can be seen in physical education by observing all the sub-structures that have made the content of the field; sub-structures that singularly and collectively constitute *less than* the sum total of movement *possibilities*.

Still *a lesser* assembly of responses and instances is derived when measures of desirability are applied to the selective process. These measures of desirability in physical education have too frequently been results of decisions based on personal taste of power position, agreed upon aesthetic standards of a compromising committee, the politics of a local, state or national professional organization, and indigenous traditions of teacher education programs of various colleges.

All these sources of decisions concerning *feasibility* and *desirability* are paradoxically incongruent with intellectual integrity of seeking the *possibility*.[7] As an example let's examine the area of gymnastics as we know it to appear in books, in courses of study and as we see it performed. To focus on the issue, let's take one small aspect of gymnastics. Let us talk about the "mount onto the parallel bars."

As a rule, this aspect of gymnastics is presented as a collection of mounts (exercises) predetermined by some authority usually representing the "desirability" dimension. These selected, confined, limited, and often scattered mounts have become the representations of how man *should* get on the parallel bars. Again, as a model for competitive gymnastics designed to pitch *all* individuals against a single performance model (the desirable model) and thereby exclude all those who cannot reach the model—it is acceptable. As a model for educational purposes true to intellectual investigation of the *possible*, it must never be used. It *EXCLUDES* potential subject matter.

Intellectual expansion (and in this case it will be manifested through expanded physical experiences) demand to approach the parallel bars as an *environment with which man interacts!*

The question is not "how do I perform the few selected mounts?" The question is, "how do I, man, interact with this environment?"

The *concept* of interaction is in the focus—the variety of mounting instances only represents this interaction. It is quite obvious that the *possibilities* are theoretically infinite. The number of mounts which result from all possible combinations of variables of posture, direction, speed and the variable conditions of the environment itself is great, again, theoretically infinite. This, then, constitutes the subject matter. This is the intellectually honest base upon which a course of studies using this environment can be developed.

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[7] **Muska Mosston, *Developmental Movement—Evolving Structure for Human Movement* (Presented to the Oregon HPER Convention, October 1969).**

Multiply this example by a thousand and multiply it by the number of environments with which man can interact via the medium of movement and you get a different picture of the *possible* curricula.

PARADOX #2: GROUPISM AND INDIVIDUALITY

One of the more obvious aspects of the physical education class is its focus on the group. Just about everything is geared for the group—*class organization* is done for the group; in fact, individuals are usually manipulated so that the end result of the organizational maneuver will satisfy the group arrangement.

Uniforms are imposed so that the *group* will look good. (We shall return to uniforms later.)

Equipment is distributed to fit the group organization; quite often at the expense of individual learning. It is quite a prevalent picture in gymnasia where 10% of the equipment and floor space is used in order not to spoil the group arrangement—the group control. (One can see this waste of space, equipment, time and consequently non-learning in units such as basketball, tumbling, etc. where only a portion of the available equipment is used while the rest is either arranged neatly on the dolly in the corner of the gymnasium or hidden in the "secret" cabinets in the director's office.)

Control and discipline are attempted through the group. Systems of *REWARDS* and *REPRIMAND* (R&R) have been devised where group pressure is either overt or implicit.

The group, or the concept of *groupism* has been elevated in physical education to almost an unshattered level and undisputed value.

However, on a slightly deeper analysis, when one examines what such procedures, such beliefs do to people, one discovers that they *intrude* upon and often *violate* the very essence of *INDIVIDUALITY*. The superimposition of group arrangements, group standards, group morality, group aesthetic value always *intrude upon* the right and the *very ability* of the individual to *make choices*.

The individual must *conform* or his conduct is identified as Deviant Behavior. Melvin Tumin in his article, "Popular Culture and the Open Society"[8] says:

> "Real creativity is viewed with suspicion and distrust because it means, above all, difference, intolerance, an insistence on achieving an individual identity. Real feeling is viewed with equal distrust and hostility because it almost always means bad manners, spontaneity, unpredictability, lack of realism, failure to observe routines. Well-rounded, adjusted, happy—these are the things we are told it is important for us to be. No points, no sharp cutting edges, no despairs and elations. Just nice, smooth billard balls, rolling quietly on soft green cloth to our appointed, webbed pockets, and dropping slowly into the slots under the table to be used in the same meaningless way in the next game. Chalk one up for mediocrity. For it is the only winner in this game."

Schwab[9] in a paper entitled, "On the Corruption of Education by Psychology" discusses group dynamism as a doctrine of education and says:

> "Once a group is fully formed, he has little or no status as an individual in his own right but only as a member of the group. It is the group that determines what will be done and, in effect, does it. And it is the group

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[8] Melvin Tumin, "Popular Culture and the Open Society," *Man Culture*, ed. by Rosenberg, Bernard, and White (Glencoe, Illinois: The Free Press, 1957).

[9] Joseph J. Schwab, "On the Corruption of Education by Psychology," *Theory of Knowledge and Problems of Education*, ed. by D. Vandenberg (Urbana, Illinois: University of Illinois Press, 1969).

> character, furthermore, that determines what is acceptable and unacceptable, good or bad, true or false."

He further states that:

> "The very nature of inquiry, whether scientific or practical, is thus altered. It ceases to be a procedure whose ultimate measure is the completeness and verity of the knowledge acquired. It ceases to be a process whose fruits are measured by careful nurtured *diversities* of criteria. It becomes instead a procedure whose ultimate measure is the continuing and increasing solidarity of the group."

Physical education abounds with instances, procedures, units and programs that exemplify this statement. In fact, we have even developed words, phrases and slogans that create public shame for anyone who does not adhere to the group doctrine.

We have even gone further than that. We often *violate* the *PRIVACY* of our students. For example: consider the organizational arrangement of classes *by height*. Height is a personal thing, it is of one's own, it is private. How does a person who happens to be quite short feel when he is *always MADE* to stand first in line day after day—year after year—always under the visual scrutiny of the teacher. Or, conversely, what about the very tall who is *always* at the end, never close enough to enjoy the warmth of the teacher?

Let us consider the privacy of appearance. There are only 3-4 professions left in our civilization that *REGULATE* attire and superimpose a *uniform*. By what divine right does a teacher demand of all her girls to wear black leotards? What about the girl who knows she looks *best* in blue? Or the boy who prefers to wear long pants because his own self-image does not permit him to appear in shorts?

By what right do we violate the privacy of movement-personal movement? Movement for self-development, movement for self-expression or movement for whatever purpose?

Everything we do in the gymnasium is *OPEN, VISIBLE, AVAILABLE* to the eyes of friend or foe.

In fact, the very architecture of our gymnasia is a violation of privacy. One can observe libraries, laboratories, even classrooms where nooks, booths, and corners are available for private involvement and participation in individual, personalized acts of learning. But not in physical education.

One can conceive of different designs for gymnasia; with low, partitioned, small areas, different levels, different lighting, different colors—areas conducive to personal engagement in learning about oneself, areas available for the student's choice and need. Areas which do not invite public pressure and stigmatization, but rather areas which invite fuller participation and evolvement of self. VanCleve Morris[10] addresses himself to this issue thus:

> ". . . Consider the matter of privacy and quiet reflection. How much opportunity is there in a typical school in America for a youngster to sit still and quiet and go over the personal choices he must take that day? . . . We have elevated gregariousness to the status of a moral commitment for today's youth. It is now suspicious behavior to declare that one wants to be alone."

A few words about two more paradoxes—in the spirit of mission, omission and submission:

PARADOX #3: MEN AND WOMEN IN PHYSICAL EDUCATION

It is quite clear that the "separatist movements" in this field belong to a different era, to past social, economic and certainly philosophical condition. Elizabeth L. Cless[17] decries the situation and says:

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[10] Morris VanCleve, "Personal Choice," *Teaching and Learning*, ed. by D. Vandenberg (Urbana, Illinois: University of Illinois Press, 1969).

> "Higher education in the United States was designed exclusively for the white, upper or middle-class male. Its procedures, its rigid uninterrupted time table, and its cost all but prohibit its use by women despite well meaning, sometimes desperate, twentieth century attempts to provide appropriate schooling for every qualified American citizen."

Paradoxically, men and women in physical education chose to confront this dilemma in their own ways by promulgating and perpetuating the myths and rationale of their own separate domain. In the second half of the 20th century—an era of new examinations of sexuality, new insights into self-concepts and emotional conditions; an era of new freedoms of association—we still hold fast to antiquated arrangements so carefully guarded by that magic, omnipotent partition separating the boys' gym from the girls' gym.

It is not only an intellectual violation of a field struggling for its knowledge identity—it is a greater violation of the essence of a society desperately searching to reduce its omissions and elevate its submissions.

PARADOX #4: CURRENT KNOWLEDGE IN THE BEHAVIORAL SCIENCES AND OBSERVED TEACHING BEHAVIOR IN GYMNASIA

Despite the prevalence of data, research, and new teaching models—physical educators, in the main, still adhere (perpetuate and defend) to the single learning model of S-R and its corresponding command model of teaching behavior: "I say —you do."

Physical educators seem to refuse to consider the data which so powerfully demonstrates the ill effects of singular teaching behavior—particularly the command style of teaching which by its very nature is designed for exclusion of alternative responses, variability in learning and performance. Some of the noble attempts by individuals in the field who have designed and demonstrated the feasibility and desirability of alternative teaching styles *in addition* to the command style have been mainly ignored—the *conduct* of the field has not shown any adjustment. We still bow to a peculiar notion of hierarchial leadership embedded in the command style. In fact, "The Spectrum of Teaching Styles,"[18] which perhaps is the only unified teaching theory, has been developed within physical education and yet, despite the echoes of curiosity and scattered attempts to "behave it"; no significant change can be observed in the behavior of teachers across America.

Our mission of developing free, responding, thinking, and critical students remains verbal—the omission is clear and frightening and the submission is dangerous. How can we expect to be considered a part of education when we so bluntly ignore the development of the very processes which make education what it is—thinking, experimenting with alternatives, evolving new ideas, asking questions, inquiring into the different processes which can come about only by means of alternative teaching styles. All this, then, is a part of *a legacy* which we impart to our undergraduates in our teacher education programs. A legacy laden with irrelevancies; a mission loaded with omissions and sadly leading to submission.

The 60's saw an attack on and vanishing of service programs. The 70's will experience similar attempts on our professional programs and the 80's will witness the culmination of potentially a glorious field. Let us not participate in the "Swan Song"—let us face now, openly and boldly the painful task of self-surgery, of self-renewal. Let us have a good year and a decade of reconstruction.

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[17] Elizabeth L. Cless, "A Modest Proposal for the Educating of Women," *The American Scholar* (Autumn 1969), pp. 618-627.

[18] Muska Mosston, *Teaching Physical Education: From Command to Discovery* (Columbus, Ohio: Charles E. Merrill Books, 1966).

BASIC INSTRUCTION

Creative Approaches to Physical Education

Max Cogan
N.E. Missouri State Teachers College

> *To be creative means to consider the whole process of life as a process of birth, and not to take any stage of life as a final stage. Most people die before they are born. Creativeness means to be born before one dies.*
>
> *—Erich Fromm*

The basic instruction program is logically the most important part of the entire physical education program. Theoretically, intramurals, voluntary recreation, and athletics are direct outgrowths of basic instruction. In colleges engaged in professional preparation, it has added significance since it serves as a model for students preparing for careers in physical education.

Despite these assumptions, the basic program sometimes has been the least innovative. It may be the responsibility of graduate assistants or coaches, however sincere, who expect primary growth through other endeavors. Although a major goal is to encourage universal voluntary participation after exposure to the program, facilities may be dominated by varsity athletics, or may be closed after 5:00 P.M. and weekends because of lack of funds to provide adequate supervision and maintenance.

These statements are probably less true now than in the past. Education is going through a period of unprecedented self-examination. As Friedlander observes, ". . . the spirit of innovation is perhaps the most outstanding characteristic of the world of education today."[1] Traditional practices relating to requirements curriculum content, management of the classroom and accepted views of student thinking, learning and motivating are rapidly changing. The ability of those who are responsible for basic instruction to meet these challenges will determine the future role and significance of the program in higher education.

SURVEY OF ASSOCIATION MEMBERS

Questionnaire

To determine some of the changes taking place or being considered in basic instruction, a questionnaire (with a cover letter) was mailed from November 10-15, 1969 to 245 members of the Association. Names were chosen from the membership list included in the *Proceedings of 72nd Annual Meeting.* One hundred sixty-six questionnaires were returned by December 22, 1969. Although some figures were obtained concerning the status of required and elective programs, they were incidental to the purpose of the survey.[2]

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[1] Bernard Z. Friedlander, "A Psychologist's Second Thoughts on Concepts, Curiosity, and Discovery in Teaching and Learning," *Breakthroughs to Better Teaching*, (Cambridge, Mass., Harvard Education Review, 1965), p. 136.

Participants were asked to respond to the following questions:

Is your program required or elective?
If required, how many years?
If elective, what limits exist concerning credits which may count toward graduation?
Have you defended your required program in the past five years?
Has threatened or actual loss of your requirement stimulated creative approaches to your program?
Describe creative approaches to basic instruction that have been initiated or are being considered in your department. . . .

Required vs Elective

One hundred and fifty of the 166 respondents indicated that their institution had a required program. The most common requirements were four semesters or two years (75), and two semesters or one year (48). Other requirements ranged from one to eight semesters. Three respondents indicated that the requirement was met by compulsory R.O.T.C. and one noted that two years of R.O.T.C. exempted a student from one year of required physical education. This practice seems particularly irrational since the two Service Academies included in this survey have four-year requirements.[3] Four institutions require physical education for certain colleges and two have a one or two year requirement, depending upon the major.

Fifteen indicated elective programs and one, no program for men. The elective pattern was varied, ranging from no limit other than the student's program to one non-credit course. Thirty-one respondents indicated that students were permitted to elect courses in physical education in addition to the requirement. This ranged from one hour to no limit other than the student's program.

Program Defense as a Stimulus for Change

Ninety-one of the 166 respondents indicated that their program had been defended in the past five years. Six have lost their requirement and four have lost part of their requirement. One college added to its requirement and two indicated that they plan to add to it upon completion of new facilities.

Sixty-one respondents stated that a threatened or actual loss of their requirement stimulated creative approaches to their programs, while four others implied that it was a factor. Twenty-eight replied that they had either decided to make changes because of professional judgment or in a few cases because of student requests.

Loss of a requirement was not necessarily a result of an attack on physical education per se. For example, Dudley Bell of Lyndon State College reports that the entire college curriculum has been overhauled; there are no required courses. Wesley Ruff of Stanford observes that there was little support for required programs since language, math, history, and others were also dropped. Thomas Burke of Hunter College notes that the program was reduced one credit, but mathematics and other disciplines were totally removed with the overall delimitation of the college's basic prescription. A few others indicated that they have met or are meeting similar challenges.

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[2] For a complete and current statistical report see Joseph B. Oxedine, *The 1968 Status of Required Physical Education Programs in Four-Year Colleges and Universities in the United States*. (Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1969), p. 16.

[3] According to Ross Merrick, AAHPER Consultant, the R.O.T.C. encroachment is far less a problem in recent years and the military does not favor this type of substitution. Letter from Elinor M. Harland, Director of Information, AAHPER, August 8, 1967.

Lack of facilities has made the elective approach more desirable for some institutions and was mentioned as a deterrent to creativity at a few institutions. Similar comments were made concerning shortage of funds by two respondents.

Authorities in physical education usually have taken the position that physical education should be required of all students. A national report states, "*Physical education . . . has potentials for continuing beneficial results; therefore, instruction in physical education, properly adapted, should be required of all students throughout their entire undergraduate career.*"[4] The assumption is that the requirement should be sufficient to provide optimum realization of program purposes.

Several respondents, primarily from large institutions, took a different position which some may consider more consistent with changes taking place in higher education. Paul Ritchie of the University of Missouri states that it is time the program is viewed in terms of contributions and quality instead of requirement. "I have serious reservations about most requirements in colleges as they now exist. The requirement is often used as an excuse for a poor program." Ben Miller and Kooman Boycheff of the Los Angeles and Berkeley Branches of the University of California observe that the elective program challenges faculty, requires excellent teaching, and tends to create high student interest and morale. Robert Pestolesi of Long Beach State College explains, "Loss of the required program has not only stimulated but allowed for creative offerings." Class size is smaller and such activities as beach volleyball, sailing, surfing, karate, and water skiing can be offered since meeting the needs of 28,000 students is no longer a requirement. Regular home exercise programs with concomitant attitude development seem to result. The University of Utah has experienced an increase in enrollment after losing its requirement. James Ewers notes that greater emphasis is placed on quality instruction, activity skill booklets, and improved use of visual aids. Skiing, judo, karate, dance classes, scuba diving, fencing are examples of popular activities. Part-time instructors, such as professional skiers, graduate students with special talents, and occasionally a qualified faculty member from another department, are utilized to supplement the staff.

Richard Westkaemper of San Francisco State concludes that the true indication of the acceptance of physical education is the total number of semester hours allowed toward graduation. "If the campus community respects and accepts your program, students will be free to elect and use credit as for other courses or subject areas." Students are permitted to use six to sixteen semester hours to fulfill requirements in their optional elective area of Basic Studies.

Carl Peterson of the University of Pittsburgh provided a classic comment summarizing a changing attitude in higher education. He states:

> Our approach to curriculum has been completely reversed. Now students tell us what they want and we try to satisfy them. When we had a requirement, we structured our curriculum in advance. . . . Now we structure after our current students have expressed themselves.
>
> Our theme is individuality. We hope to create experiences that will encourage students to plan, work, and self-evaluate.

It is clear that in response to large enrollments, limited facilities and funds, and to general attacks on all required courses, some institutions have been required to lower or drop their requirement. On the basis of this survey, however, the trend toward dropping the requirement is moderate, if in fact it can be called a trend. Several respondents noted that they hoped to begin or increase their requirement as soon as more favorable conditions developed. This seems to indicate that many physical education departments are meeting the challenge of change and seeking new ways to gain acceptance and respect from colleagues and students.

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[4] *Report of the Conference on Physical Education for College Men and Women*, Rev. (Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1959), p. 11.

General Trends

Some respondents frankly admitted that they were not creative in their approach to the required program. Many of them, however, have said that the time is fast approaching when changes will need to be made.

Some others indicated that there was no need to be creative; just doing a good job has insured the success of their program.[5] It was noted that outstanding instructors do their own creating and that students appreciate good instruction by specialists. One respondent noted, "no coaches." It is interesting that these respondents have for some time been emphasizing practices which many others considered new and innovative. For example, Frank Beardon of Rice observes that no new problems exist other than students and faculty wanting more time and a year added to the required program. Last year at Rice, 1900 participated in intramural and 300 in extramural activities out of a student body of 2,800. A strong sports club program is outlined in the departmental bulletin of information. Students are provided an opportunity to participate in 30 different activities and policies for use of facilities are clearly spelled out. Adaptive programs are provided when appropriate, and fitness is evaluated. Flexibility to meet individual differences appears to be the rule.

If one trend stands out, it is the great impetus to broaden the program. There seems to be a recognition that to make programs effective there is greater need to recognize individual differences. Several other trends seem related to this goal.

Instruction is being emphasized and teaching methods improved. More schools are using specialists to teach activity courses and some are meeting staff shortages by hiring part-time experts. Greater use is being made of television and television replay to assist students in developing skills and in instruction in the intellectual aspects of physical education.

Some schools are polling students, faculty, and even alumni to ascertain their attitudes concerning physical education and to obtain suggestions for improvement. Computers have been found very useful for this purpose.

A number of colleges are utilizing flexible scheduling to provide more class time. Some have worked out modules unique to their program, others have simply used variations of the double-period. Where facilities are crowded, one school has used an overlapping schedule in which one class leaves as another enters to utilize time ordinarily lost for dressing and showering.

The program of prescribing the same activities for all students is dying. Many schools permit students complete freedom of choice within the requirement; others permit free choice as soon as the student demonstrates certain competencies.

Many schools provide students the opportunity to "test out of" part or all of their required program. This policy seems in harmony with general trends in other disciplines.

Schools tend to be more conscious of classifying students to provide them with better guidance. Medical, fitness, and competency examinations seem to be helpful in developing more insight in individual program planning.

More individual approaches are being used which are comparable to independent study in other disciplines. Students are encouraged to develop home exercise programs and with guidance are given more opportunities for self-evaluation. Classes may meet one day a week for lecture, which is supplemented by individual programs of jogging, weight training, circuit training, isometrics, and others. One school encourages older students to use a project approach in meeting their requirement.

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[5] One new chairman indicated that the music department wants physical education credit for the marching band and that athletes are excused from the required program. He implied that the most creative thing he could do in his first year was to get these things changed.

Some schools have initiated or enlarged faculty programs, giving them first-hand knowledge of the values of the program. In general, more attention is devoted to public relations and communicating the values of the program to the students and faculty.

There is an increasing utilization of sports clubs on campus and some off-campus to meet requirements. The assumption is that students are more highly motivated because such clubs usually emphasize higher levels of skill and instruction. Many colleges offer instruction at various levels in some activities to provide for beginning, intermediate, and advanced participants.

There is a tendency to make the men's and women's requirements more alike and to increase coeducational activities. Pass-fail approaches or choice of pass-fail or grade are being used to increase and encourage participation.

Students are being provided more opportunities to engage in and experience research through jogging and testing programs. More emphasis seems to be placed on improving measurement to evaluate programs.

One of the strongest trends is the emphasis on lifetime sports and related activities, such as individual fitness programs. Team sports are being used more sparingly and it seems that even in this category there is more emphasis on such sports as soccer, which tend to be excellent for conditioning.

Finally, many respondents indicate a new emphasis on intellectual content in physical education. These approaches are commonly lecture-laboratory combinations emphasizing the "why" of physical education. Patterns are somewhat diverse although the most popular title seems to be "Foundations of Physical Activity." Grading is ordinarily based on the student's mastery of knowledge and concepts of physical education. Fitness and skill evaluation is used frequently for the purpose of developing insight rather than grading.

Examples of Innvoation

Charles Kuntzleman of Lehigh County Community College describes a course titled "Fitness in the Modern World," which was designed for a program without facilities. For the entire semester students are presented material about exercise. After the third week, each student designs a personal exercise program with instructor guidance. The student selects and administers a series of performance tests prior to engaging in the exercise program. The program becomes his homework assignment for the remainder of the term. At the end of the semester he retests himself. The course is graded on the basis of a paper in which the student is required to justify and evaluate his program. Perry Johnson's, *Physical Education: A Problem Solving Approach to Health and Fitness*, is used as a text.

Harold Swanson of Rock Valley College describes his program as a "gypsy program." His school is one of 35 percent of the junior colleges without a gymnasium. His entire program has been developed around the creative use of town facilities: The National Guard Armory, the high schools, the YMCA, the YWCA, the Park District, the churches, the bowling lanes, and the private clubs. He conducts a two-year required program by working around conflicts and maintaining reasonable flexibility. He observes that dependence on community facilities has been a blessing in disguise by requiring the college to become in reality a community college. ". . . the student has been intimately thrown in contact with the facilities he will use as an adult. . . . This goes a long way toward starting him on the reality of a carry-over experience in adult life."[8]

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[8] J. Harold Swanson, "Use of Community Facilities for Junior College Physical Education," p. 6. (Mimeographed.)

Martin Rogers of the State University College at Brockport describes a program based on maximum freedom of choice for the student. He states:

> It would seem reasonable to capitalize on student energy to satisfy student physical education purposes by organizing the program along lines indicated by student participation. Thus, all physical education, athletic, and physical recreational activities become parts of the physical education program and may satisfy a requirement. The choice of activity, its level of expertness, and the intensity of participation is left up to the student—the important point is that he participates.[7]

Sports clubs in less traditional activities such as horsemanship, judo, skiing, dance, sailing, and mountain climbing fulfill requirements. Individual programs of jogging, weight training, and calisthenics also are acceptable.

Richard Wescott of Gettysburg College explains a participation point system which operates much like the Brockport plan but just for the January term of the college's new 4-1-4 curriculum plan. He notes that this prevented a cut in their requirement and keeps active those students who are in most need of physical education.

At St. Olaf, classes in circuit training and jogging meet once a week with instructors to discuss the physiological implications of their activity. Students are put on an honor system and "work out" on their own time. Axel Bundgaard also notes that an experimental class of 60 men and 60 women is being conducted in freshman physical education. Men are exposed to modern dance, and women to handball and weight training. General sessions on physiological adaptations of the human body are held, and the group may be divided in many ways according to the structure needed at the time. Generally, girls seem to try harder when boys are around.

A. J. Hovland of the University of Wisconsin desribes a unique approach used at his institution. All students are required to take a one semester non-credit Foundations course. Additional courses at one credit per semester may be elected. The required program is based more on attaining specific standards than on just hours of participation. Testing is extensive and all students, including athletes, are required to enroll in Foundations. Since there is a trend toward allowing students more self-determination in selection of educational goals, the required non-credit course seems like an excellent approach to stimulate participation.

Instructional television has been widely used by many institutions and has been particularly helpful with large classes. Taping permits instruction by the most highly qualified staff member. Students, however, still tend to prefer the normal student-teacher relationship. Video-replays, particularly on an individual level provide for more individualized instruction.

Many of the most creative approaches have been related to the "why" and "how" of physical education. Many of these programs are classified as Foundations courses. Many institutions indicate that they either have initiated a Foundations course or are considering one. Much has been written about these programs and has appeared in past issues of the *Proceedings*.

Claude Wolfe states that Manchester College has instituted a course entitled, "Introduction to Physical Education." Professors from the Psychology and Sociology departments are utilized in team teaching. Students are getting valuable help in looking at themselves and their needs.

Warren Fraleigh of San Jose State describes the integration of physical education with the New College theme, "The Study of Man." It emphasizes the study of man as a moving being. This conceptual approach is unique and seems to open many possibilities for interdisciplinary study.[8]

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[7] Martin H. Rogers, "Serving Student Purposes," (Paper presented at 72nd Annual Meeting of the National College Physical Education Association for Men, Durham, North Carolina, January 9, 1969), p. 6.

The program is divided into three kinds of experiences: activity instruction and participation, lectures and readings, and seminars. Man is examined from three perspectives: the natural sciences, the social and behavioral sciences, and the humanities and arts. Physical activities are grouped on the assumption that a principal experiential emphasis is exemplified in terms of one of the three perspectives. For example, gymnastics and swimming are classified in the natural science category since they seem to emphasize the performer's awareness of his body and its movements as an object in a universe which is subject to certain chemical and physical laws. Students engage in three activities over a two-semester period, classes meeting twice a week. Students choose one activity from each of the three categories to fulfill this requirement. Throughout the year lectures are provided for students with mimeographed copies made available for study and analysis. Lectures attempt to identify and clarify concepts which are applicable to the study of man as a moving being. They are supplemented by a carefully selected reading list. Finally, students meet each week for a one-hour seminar. Seminars are designed to assist students to relate and integrate knowledge gained from *doing movement* and *verbalizing about movement* and to translate these insights into *understanding of movement*.[9]

The classic Foundations course is designed to improve attitudes and to stimulate motivation for continued participation in physical education. The academic community tends to be sympathetic to approaches that utilize academic content and problem solving experiences. But Foundations courses have done more than add a new perspective; they frequently have integrated all that was good from the past while adding the "how" and "why." Excellent practices such as assessing attitudes, somatotyping, classifying, basing programs on achieved competencies rather than mere participation time, fitness evaluation and guidance, body alignment and posture education, diet and weight control guidance, and encouraging greater voluntary participation are incorporated. Foundations approaches serve ideally as basic courses in the "integrated program." They are structured to encourage a semi-remedial approach which seems necessary in higher education at this time, and they emphasize the cultivation of individual motivation.[10]

EPILOGUE

Much of the curriculum in physical education is inherently creative. Undoubtedly, this is a major motive for student participation. Despite this innate quality, physical education sometimes has been isolated; something added to general education but not really an integral part. Although the discipline has a unique contribution it is essential that it contribute to the understanding and solution of the broader problems of man.

Arthur Jersild, Professor Emeritus of Psychology of Teachers College, Columbia University, has noted that physical education has more potential for self-understanding than any other discipline. Experiences in physical education make a person feel better or worse about himself, never neutral. He learns to accept his body or reject it, to be a worthy competitor or a poor one, to identify with masculine and feminine roles or reject them, to develop a balance between work and leisure or live under constant stress, to rely on his own resources or to be overly dependent and so on. In an age when many young people seem attracted to various excesses, physical education with its potentials for creative expression and self-understanding can have an important stabilizing role.

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[8] Warren P. Fraleigh, "An Instructional Experiment in Actualizing the Meaning of Man as a Moving Being," *Journal of Health, Physical Education and Recreation*, 40:53-58 (January 1969).

[9] Warren P. Fraleigh, *Lecture I: The Meaning of Man as a Moving Being—The Concept and Structure of Physical Education in the New College of San Jose State College*, pp. 2, 15, 19-21. (Mimeographed.)

[10] John A. Friedrich, "Meeting College Student Needs Through an Integrated Program of Physical Activity," (Paper presented at 70th Annual Meeting of the National College Physical Education Association, San Diego, California, December 29, 1966), p. 4.

Another theme seems relevant to modern needs. It makes little sense to improve man's capacity to consume and utilize oxygen when each year there is less oxygen to breathe. The old concept of "living in harmony with man's biological nature" needs to be reinterpreted and integrated with the broader study of ecology. Man cannot practically be separated from his environment, nor can physical education ignore it. Conceptual models of physical education which contribute to self-understanding and the study of man and his environment have tremendous potential for securing the proper place of physical education in general education.

It is now well-established that the teacher is the determining factor in developing and encouraging creativity. Experience with various creative problem-solving courses at colleges and universities verifies that people can become more creative when guided to develop their potentials and exposed to certain educational experiences.

Creativity can be nurtured; it also can be destroyed. Clayton Taylor distributes a list of "Killer Phrases" at his Workshop on Creativity at The University of Utah. None of these phrases suffer from lack of use; all are guaranteed to chloroform creative thinking.

A swell idea, but . . .
We've never done it that way.
It won't work.
We haven't the time.
It's not in the budget.
Too expensive.
We've tried that before.
Not ready for it yet.
Good idea, but our school is different.
All right in theory, but can you put it into practice?
Too academic.
Too hard to administer.
Too much paperwork.
Too early.
It's not good enough.
There are better ways than that.
It's against school policy.
Who do you think you are?
You haven't considered . . .
Let's not step on their toes.
Somebody would have suggested it before if it were any good.
Too modern.
Too old-fashioned.
Let's discuss it at some other time.
You don't understand our problem.
Why start anything now?
We're too big for that.
The new teachers won't understand.
The experienced teachers won't use it.
We have too many projects now.
Has anyone else ever tried it?
What you are really saying is . . .
It has been the same for 20 years, so it must be good.
Let me add to that.

I just know it won't work.
Let's be practical.
Let's form a committee.
It needs more study.
Let's shelve it for the time being.

Lecture-Laboratory Physical Education Program Organization and Evaluation[1]

Charles Corbin
Texas A & M University

In an era when students are more knowledgeable and more critical than ever before, it becomes the educator's responsibility to provide this thinking student with a meaningful college curriculum. This is true of the general education programs and the professional courses of study as well. The student is no longer willing to blindly accept our offering as a "requirement" but asks, "Of what value is the course to me?" In addition the thinking college faculty is attempting to provide the student with only the most meaningful of educational experiences. For this reason, many heretofore required courses have been axed. With every area of the school curriculum experiencing an explosion of knowledge, each desires more of the student's time. However, each addition to the curriculum requires a deletion in another area. The thinking student and the thinking teacher are trying to crowd only the *most* meaningful of studies into an already crowded program.

The thinking physical educator is cognizant of the needs of the students and is a participant, with faculty in other areas, in the evolution of the college program of excellence. It is becoming increasingly clearer that the physical education program of excellence must include more than courses in skill and physical fitness development. The needs of modern man require a knowledge of "why" physical activity is important. In addition practical information concerning a physical education for living is demanded. Although skill learning in popular seasonal sports is of interest to many students, it does not take much foresight to see the inadequacies of these activities as part of the pattern of daily living during middle age and the later years of life.

Several colleges and universities have attempted to fill the need for knowledge and understanding of exercise through the introduction of Lecture-Lab Courses commonly referred to as "values," or "foundations" programs. At Texas A&M University such a program has been introduced as the first of the four semester hours of physical education required for all university students. The course entitled "Concepts and Experiments in Physical Education" is designed to inform the student of the key concepts of exercise and activity while helping the student assess his personal needs in reference to current and future exercise and physical activity. The recently initiated course is not a substitute but, hopefully, a valuable supplement to the other activity courses required of all students.

The purpose of this paper is to present the current organization of the Texas

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[1] Additional tabular material is available on request.

A&M Lecture-Lab Course in Physical Education and to share some ideas gleaned from one year's experience and the results of a one year program evaluation.

Organization

Several organizational patterns are possible in this lecture-laboratory type of physical education: (1) large lecture sections (200 or more) with several smaller labs scheduled at other times during the week, (2) small lectures and laboratories both taught by the same instructor, and (3) moderate size lecture sections with lab classes one half of the lecture class size. All of the above are based on the assumption that the student meets two times a week, once in lecture and once in laboratory. In cases where classes meet three times a week any of the organizational plans may be appropriately adapted.

It goes without saying that each school, like each student, has its unique needs and interests. To this extent the school wishing to start a "Concepts Lecture-Lab Course" would need to organize on a customized basis. However, some suggestions based on experience might be helpful. Some organizational suggestions follow:

1) A flip-flop system using one lecture instructor and two laboratory instructors has worked quite well in the Texas A&M program. For classes that meet two days a week, those who attend lecture (40-80) the first day attend labs on the second day (subdivided into two groups of 20-40 per lab). Those who attend lab the first day, attend lecture on the second meeting of the week.
2) Small laboratory sections are quite effective. Large lectures seem to work fine, but it is essential to keep labs small.
3) In a program designed to meet the needs of the thinking student, it is essential to have thinking teachers. Although this is required freshman physical education, the most knowledgeable teacher should teach this course.

Content

"What to teach?" This is a most appropriate question when confronted with the challenge of organizing a lecture-laboratory course in physical education. Content selection will most certainly depend on whether the course is coeducational or non-coed, on the number of days the class meets, the needs of the students, and the future physical education courses to be taken. On the basis of experience at Texas A&M University a suggested course content of twenty lectures and twenty laboratories has been developed. On the basis of the above listed factors each instructor can choose those areas of study according to the time available (see Table 1).

Table 1—Content Selection[3]

1. Introduction	1. The Values of Physical Education
2. Physical Fitness	2. Physical Fitness
3. Flexibility	3. Flexibility
4. Strength	4. Strength
5. Obesity	5. Obesity
6. The Blood Stream	6. Heart and Exercise
7. The Heart	7. Cardiovascular Endurance
8. Exercise and the Heart	8. Cardiovascular Endurance
9. Theories of Heart Disease	9. Exercise Programs
10. Programs of Exercise	10. Exercise Programs

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[3] C. B. Corbin, L. J. Dowell, R. Lindsey, and H. Tolson, *Concepts in Physical Education: With laboratories and experiences* (Dubuque, Iowa: William C. Brown Company, 1970).

11. Exercise Guidelines
12. Skill Learning
13. Posture
14. Body Mechanics
15. Care of the Back
16. Stress
17. Tension and Relaxation
18. Artificial Respiration &
    Artificial Circulation
19. Health
20. Health Benefits of Exercise

11. Skill Evaluation
12. Skill Evaluation
13. Posture
14. Body Mechanics
15. Care of the Back
16. Stress
17. Relaxation
18. Artificial Respiration &
    Artificial Circulation
19. The Values of Physical Education
20. Guidance

Program Evaluation

At the end of one semester and at the end of one school year the Texas A&M University "Concepts" program was evaluated by the students. The following tables present the results of the student's evaluation of the "Concept" program.

Table 2—Program Evaluation (Semester 1)

Area	Favorable reactions	Unfavorable reactions
Course	69.4%	30.5%
Lecture	77.9%	22.1%
Labs	50.8%	49.2%

Table 3—Program Evaluation (Semester 2)

	Rating				
Area	Excellent	Very Good	O.K.	Poor	Worthless
Course	17.9%	42.1%	35.4%	3.6%	.9%
Lectures	23.6%	49.1%	25.0%	1.8%	0%
Labs	10.1%	36.2%	41.3%	9.8%	2.5%

Student evaluation of teachers and courses has shown that those courses, at the college level, which receive lowest student ratings are those which are large in size, lower division, all male, and required. The first attempt at the new lecture-lab program met all of the above standards except that classes were not exceptionally large. In addition, the stereotype of "physical education equals games and activity" seemed to be one factor working against a favorable student rating. The fact that these freshmen students were required to sit through one lecture a week, take five quizzes, take one written final exam, and read a textbook was not expected to contribute to a favorable rating by freshmen students. Nevertheless, 70% rated the course favorably after the first semester and 95% rated the course favorably the second semester. When asked the question, "How did Concepts compare in value with required English, math, and history?", only math drew a higher rating. Perhaps most surprising of all was the fact that students indicated a two to one preference for "Concepts" as more valuable than the activity class they took their first semester in school.

Among the most common student comments concerning course improvement were the following: (1) have more films, (2) change the test procedures, (3) have smaller labs, (4) have more activity in lab, (5) have more lecture-lab coordination, and (6) have another concepts course to follow up the first. Many of the suggestions were included in planning for the second semester. However, even with dramatic changes some of the same comments appeared in the second semester evaluation.

Suggestions

In general, it seems that the program [illegible] been successful and well received at Texas A&M University. Certainly it is hoped that the future will see much improvement. Some practical suggestions from our one year's experience may be helpful to those interested in pursuing a lecture-lab physical education course.

1) *Have interested teachers.* The teacher makes the program. His or her enthusiasm will go a long way in making your program a success.
2) *Provide inservice training.* Both lecture and laboratory instructors must be knowledgeable and well prepared. Provide opportunities for those who need to learn the information to be taught. The purpose of the "Concept" type course is to inform the student. Uninformed instructors can defeat your entire purpose.
3) *Be contemporary.* Recognize students as the intelligent individuals they are. Do not try to oversell, present students with the facts and let them make their own decisions.
4) *Use visual aids.* Students appreciate good and meaningful visual aids, including films. However, video tape television presentations have not received good ratings by students.
5) *Clarify purpose.* At the outset make clear to the students the purpose of the "Concepts" course. Explain that physical activity will be limited and why this is so. Point out that physical fitness cannot be developed in class alone; conscientious personal effort is required.
6) *Extra time.* If classes meet more than two days a week, use the extra days for activity and exercise of the types that can be used later in life.
7) *Let students succeed.* A major purpose of physical education is to prepare people for living. If this is true, the lecture-lab course should be one in which every individual can succeed. Be careful of making the "Concepts" course into physical education's answer for "academic" respect.
8) *Follow-up.* Make sure that activities which follow "Concepts" type programs are consistent with the facts presented in the lectures and labs.
9) *Don't Cop Out.* The lecture-lab course should be instituted to meet student's needs. Don't sell out students by adopting this program because large lectures reduce teacher loads and ease facility use problems.

Summary

At Texas A&M University the Lecture-Laboratory Physical Education program has, in our opinion, been successful. The majority of students respect the program and see its value. The students are presented information which most haven't studied previously and which, hopefully, will be useful for living. While problems exist, as they do with any new program, we encourage other institutions to meet the needs of thinking students and supplement their program with a lecture-laboratory "Concepts" type program.

Individualized Instruction in the College Physical Education Program

Michael A. Sherman
University of Pittsburgh

Publication of a paper about individualized instruction might convince the reader of the author's expertise as a learning theorist. Unfortunately, his brilliance in these matters compares with the bottom half of a double boiler—always expected to get up a good head of steam but never knowing what's cooking! This paper, therefore, must not be viewed as a scientific masterpiece. Its purpose is to describe some changes made in a basic instruction course at the University of Pittsburgh in order to adapt the learning environment to individual differences.

Most college physical educators are aware of the differences in motives, competencies and learning styles of students and realize that such differences are seldom considered by traditional teaching methods. Students in physical education are frequently exposed to mass-teaching methods and teaching behavior which demand passive acceptance of group standards in appearance, attendance, practice and achievement. The fact that many previously secure college physical education requirements are being challenged should stimulate serious consideration of changes in curriculum and instruction which provide evidence of our strong professional commitment to the personal uniqueness of each student. New and imaginative approaches are needed that foster student self-direction and self-pacing, provide alternative objectives and program opportunities, stimulate thinking essential for meeting personal needs through movement, encourage self-diagnosis and self-evaluation and develop motivation for life-long participation in physical activity.

Research about the interaction between learner characteristics and effective learning strategies is extremely scarce. In most cases, such research is the incidental by-product of an investigation rather than its central theme. Recently, however, McKeachie[1] published a review of research on teaching at the college level which included some studies that probed for relationships between learning and the personality and intelligence of students. One of these, by Calvin, Hoffman and Harden,[2] indicated that less intelligent students did consistently better in group problem-solving situations conducted in an authoritarian atmosphere than in a permissive environment. Patton[3] gave statistical evidence to show that students with high achievement motivation and independence from authority were most likely to accept responsibility for self-directed learning. A study by Wispé,[4] who used TAT-like measures of personality, found that "insecure" students had favorable feelings about permissive teaching, "satisfied" students favored both permissive and directive teaching and "independent" students appeared likely to display aggression against directive instructors. It remains to be substantiated whether there is a relationship between a student's preferred teaching method and the one with which he learns most effectively.

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[1] W. J. McKeachie, "Research on Teaching at the College and University Level," *Handbook of Research on Teaching*, N. L. Gage, ed., (Chicago: Rand McNally, 1963), pp. 1118-1172.

[2] A. D. Calvin, F. K. Hoffman and E. L. Harden, "The Effect of Intelligence and Social Atmosphere on Group Problem Solving Behavior," *Journal of Social Psychology*, 45 (1957), pp. 61-74.

[3] J. A. Patton, "A Study of the Effects of Student Acceptance of Responsibility and Motivation of Course Behavior" (Unpublished Doctoral Dissertation, University of Michigan, 1955).

[4] L. G. Wispé, "Evaluating Section Teaching Methods in the Introductory Course," *Journal of Educational Research*, 45 (1951), pp. 161-186.

The selection of teaching methods must not only be considered in relation to personal traits of the learner, but the kind of behavior being learned. Glazer[5] argues, with substantial scientific support, that different instructional processes are required for rote verbal learning, psycholinguistics, memory, concept formation, problem-solving and thinking and motor skills learning. Oxendine[6] emphasized the importance of individual differences in the learning and performance of motor skills. In general, motor skills acquisition depends upon readiness, motivation, interest and previous experience in tasks similar to those being learned. The anxiety and aspiration levels of the student seem to have differential effects upon motor learning. Efforts to identify a general intelligence factor governing successful acquisition of motor skills have been relatively unsuccessful, most studies in this area finding low positive or no correlation. However, Fleishman[7] found that certain mental and perceptual functions may be quite influential during the early stages of practice.

The relationship between visual perception and motor skills learning is poorly understood although visual acuity, visual perception, depth perception and peripheral vision tend to be superior in athletes compared with less skilled individuals. Phillips and Summers[8] found that kinesthesis seems more related to learning how to bowl during the early stages of practice than in the later stages. Clapper[9] reported low correlations between motor skills learning and kinesthesis tests of target pointing, arm raising, finger spreading and ball balancing.

Further research on the relationship between learning in physical education and the characteristics of the learner is unavoidable. One of the major weaknesses in this area of investigation has been the failure to consider the relationship under various teaching-learning conditions. The work of Mosston,[10] who has developed a model for identification of various teaching styles, should simplify the task of studying learning under different teaching methods. If different learners do, in fact, progress more efficiently under different conditions, then the physical education environment should be arranged to link the learner with the method most appropriate for the acquisition of various behaviors.

Within the last decade, the professional and scientific literature in education and related fields has been flooded with information about techniques for individualizing instruction. Much has been written about independent study, tutoring, programmed learning, computer-assisted instruction, team-teaching, core curricula, flexible scheduling and ability grouping, all of which provide some measure of individualized education. But, individualized instruction is more than any one or a combination of these approaches. Individualized instruction is the major theme in an educational system and consists of planning, conducting and evaluating, with each student, programs of study that are tailored to his unique learning goals, learning styles and personal characteristics.[11]

Programs of individualized instruction, specifically Individually Prescribed Instruction (IPI), in mathematics, reading and social studies have been designed by the Learning Research and Development Center at the University of Pittsburgh.[12] These IPI programs are currently being implemented and evaluated in several elementary schools throughout the United States. The dominant features of IPI are: (1) identification, sequential arrangement and listing of behavioral objectives; (2) diagnostic testing to determine learner characteristics; (3) placement tests to determine the learner's location in various curricular streams; (4) curriculum-embedded tests and posttests to determine progress and mastery of objectives; (5) daily lesson prescriptions which permit independent, self-paced learning; and (6) a computerized information management system to permit storage and retrieval of data about learner characteristics and progress.

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[5] Robert Glaser, "Learning," *Encyclopedia of Educational Research* (4th ed.; New York: Macmillan, 1969), pp. 706-733.

[6] Joseph B. Oxendine, *Psychology of Motor Learning* (New York: Appleton-Century-Crofts, 1968).

[7] E. A. Fleishman and W. E. Hempel, Jr., "Changes in Factor Structure of a Complex Psychomotor Test as a Function of Practice," *Psychometrika*, 19 (1954), pp. 239-252.

[8] M. Phillips and D. Summers, "Relation of Kinesthetic Perception of Motor Learning," *Research Quarterly*, 25 (1954), pp. 456-459.

[9] D. J. Clapper, "Measurement of Selected Kinesthetic Responses at the Junior and Senior High School Levels" (Unpublished Doctoral Dissertation, State University of Iowa, 1957).

[10] Muska Mosston, *Teaching Physical Education* (Columbus, Ohio: Charles E. Merrill, 1966).

[11] Robert Glaser, "The New Pedagogy," Working Paper No. 1 (University of Pittsburgh, Learning Research and Development Center, 1967).

Teacher behavior in IPI involves little time devoted to the dissemination of knowledge by lecturing to a group. Instead, teachers become learning facilitators and evaluate student records, diagnose learner needs, redirect off-task learning activities and create learning prescriptions. Frequent staff conferences are held to discuss individual students, adapt learning materials and make future plans for more student-oriented instruction. So far, research on IPI indicates that IPI students do as well as non-IPI students on standard achievement tests but progress at a faster rate and perform better on placement tests. It is felt that many of the benefits of IPI cannot be measured by achievement tests and, consequently, criterion measures are being designed to determine how IPI influences such traits as motivation, attitude, self-direction, problem-solving and creativity.

A pilot project was conducted at the University of Pittsburgh for the purpose of adapting instruction in developmental movement to individual differences. The subject matter of developmental movement includes the meaning and measurement of physical fitness, scientific principles of improving physical fitness, physical training techniques and the role of physical activity in the preservation of health and the prevention of disease. These and other topics are usually taught in "scientific foundations courses" like those offered at Illinois, Michigan State and Toledo. The initial thrust of the project was the design and utilization of educational materials and teaching styles to foster student independence in planning, executing and evaluating individual developmental movement programs. These materials were, for the most part, original but some were modifications of those presented in textbooks by Adams,[13] Johnson[14] and Van Huss,[15] and their respective associates.

Thirty-two normal college men, average age 18 years, participated in the project from January to April, 1969. These men had originally enrolled in a required physical education class and were "naive" about the project until the initial class meeting. The class met for 15 weeks, for one hour twice each week, and was taught by two instructors, one serving as primary decision-maker and the other as an assistant. For the first seven weeks, the class was exposed to a planned series of orientation lectures, discussions, demonstrations and practicums. Diagnostic tests were administered by a team of instructors to determine physique, body composition, motor fitness, cardiovascular efficiency, physical work capacity, body alignment and perceived exertion. Techniques of progressive resistance training, circuit training, interval training, continuous training, tempo training and calisthenics were learned through actual participation and by reading supporting "handout" materials.

At the end of the seventh week, the students were asked to design their own developmental movement programs which would be used for the remainder of the term to help them satisfy physical fitness objectives. The programs and an evaluation of their effectiveness would be submitted to the instructor in written case study form. Students were encouraged to confer with the instructors and other staff members when selecting and designing their prescriptions. In addition to prepared materials, students were given access to journal articles and books about developmental movement programs. Each student developed his program according to the following specifications:

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[12] *A Progress Report: Individually Prescribed Instruction* (Philadelphia: Research for Better Schools, 1969).

[13] W. C. Adams, *et al.*, *Foundations of Physical Activity* (Champaign, Illinois: Stipes, 1965).

[14] Perry B. Johnson, *et al.*, *Physical Education: A Problem-Solving Approach to Health and Fitness* (New York: Holt, Rinehart and Winston, 1966).

[15] Wayne D. Van Huss, *et al.*, *Physical Activity in Modern Living* (2nd ed.; Englewood Cliffs, New Jersey: Prentice-Hall, 1968).

Diagnosis of personal characteristics. Scores from diagnostic pretests were interpreted by comparison with percentile norms for University of Pittsburgh males and a physical fitness profile was constructed to illustrate strengths and weaknesses. Information was also gathered about preferred physical activity experiences and the physical and social climates in which these experiences would be performed.

Specification of developmental goals. A list of developmental objectives, usually four or five, was prepared. Each objective was behaviorally stated so that the student knew exactly what response was required to show improvement, the quantity and quality of the response and the conditions under which the response was expected. For example, one student aspiring greater endurance stated the following goal: "I will perform the one-mile run between 5:45 and 6:00 on an indoor, tartan track as evidence of improved endurance running performance."

Determination of initial status in relation to goals. For each behavioral objective, a pretest was designed, administered and scored. Pretest results provided information about present performance levels and the amount of improvement needed for achievement of objectives. In some cases, pretest results were used as the basis for prescribing the initial "workout" dosage. Some students had to revise behavioral objectives when pretests indicated that their level of aspiration far exceeded their potential improvement.

Prescription of developmental movement programs. The nature, amount, intensity, sequence and work/rest distribution of the program was described. Also included were details about the method and criteria for progressive overload, equipment, facilities and space required and procedures for recording daily progress. Some programs utilized curriculum-embedded tests to monitor progress (for example, changes in time required to complete a circuit training course). Program prescriptions varied considerably among students, the most popular involving running, circuit training, weight training, basketball, paddleball or combinations of these. One student designed a relaxation training regimen and two others used a treadmill and bicycle ergometer program, respectively. Swimming programs were prohibited due to the presence of classes in the pool.

Individual programs were executed for seven weeks. During the execution phase of the course, the instructors presented mini-lectures about selected aspects of exercise and health, evaluated training records, suggested program changes and provided assistance for students experiencing difficulty with mechanics and technique. Considerable verbal encouragement was given to maintain motivation, especially for students having their first experience in strenuous training.

Several of the diagnostic tests were repeated at the end of the course. Scores for 24 of the 32 participants were analyzed by paired-observation t tests to determine whether significant mean gains were made as a result of the programs. The statistically significant results (see Table 1) were as follows: a reduction of body fat as predicted from skinfold thickness; an increase in static strength of dominant hand grip; an increase in muscular endurance of the arms, shoulders and upper back as measured by "all-out" chin-ups; an increase in muscular endurance of the abdomen as measured by bent-knee sit-ups for two minutes; an increase in gross body agility as measured by the six-count agility exercise; an increase in trunk extent flexibility as measured by Cureton's back hyperextension tests; and an increase in distance covered in the 12-minute walk-run test. Changes in scores on the Adams Attitude Scale showed a shift toward

Table 1—Physical and Attitudinal Changes of College Men Engaged in Individual Development Movement Programs
(n = 24)

Variables	Units	M_1	M_2	M_{diff}	SE	$t_{(sig.)}$
Body weight	kg.	75.3	74.9	0.4	0.942	0.424 (NS)
Body fat	%	18.1	16.7	1.4	0.445	3.146 (.01)
Grip strength	lbs.	130.0	135.0	5.0	1.902	2.629 (.05)
Chin-ups	reps.	4.0	5.0	1.0	0.321	3.115 (.01)
Trunk flexion	in.	11.1	11.0	0.1	0.628	0.115 (NS)
Back extension	in.	14.5	15.7	1.2	0.416	2.885 (.01)
Agility run	sec.	18.6	18.0	0.6	0.558	1.075 (NS)
Long jump	in.	88.0	83.6	–4.4	1.107	–3.975 (.01)
Agility exercise	n/20 sec.	24.0	31.0	7.0	1.238	5.654 (.01)
Sit-ups	n/2 min.	49.0	53.0	4.0	1.438	2.782 (.05)
Balance on rail	sec.	4.6	5.2	0.6	0.498	1.227 (NS)
12-min. run	miles	1.46	1.62	0.16	0.029	5.517 (NS)
Attitude	pts./120	81.0	87.0	6.0	3.318	1.808 (NS)

–sign indicates a regression in an attribute.

Table 2—Physical and Attitudinal Changes of College Men Engaged in Sports Skills Instruction Programs
(n = 24)

Variables	Units	M_1	M_2	M_{diff}	SE	$t_{(sig.)}$
Body weight	kg.	70.5	71.9	1.4	0.330	4.242 (.01)
Body fat	%	16.2	15.8	0.4	0.322	1.242 (NS)
Grip strength	lbs.	124.0	121.0	3.0	1.991	1.507 (NS)
Chin-ups	reps.	5.0	5.0	0.0	0.300	0.000 (NS)
Trunk flexion	in.	11.1	11.2	–0.1	0.485	–0.206 (NS)
Back extension	in.	14.8	16.0	1.2	0.462	2.597 (.05)
Agility run	sec.	18.3	18.4	–0.1	1.500	–0.067 (NS)
Long jump	in.	85.0	83.1	–1.9	1.205	–1.577 (NS)
Agility exercise	n/20 sec.	26.0	32.0	6.0	0.969	6.192 (.01)
Sit-ups	n/2 min.	46.0	49.0	3.0	0.959	3.128 (.01)
Balance on rail	sec.	5.1	5.2	0.1	0.671	0.149 (NS)
12-min. run	miles	1.47	1.55	0.08	0.031	2.581 (.05)
Attitude	pts./120	77.0	70.0	–7.0	3.051	–2.294 (.05)

–sign indicates a regression in an attribute

more positive feelings about college physical education, however, the mean change was not statistically significant.

The physical fitness and attitudinal changes for the developmental movement group were compared with those exhibited by 24 males who participated in a 15-week program of skills instruction in gymnastics, paddleball and volleyball. Analysis of data for the sports skills instruction group (see Table 2) revealed a significant increase in body weight, improved trunk extent flexibility, better gross body agility and greater distance covered in the 12-minute walk-run. The most interesting change in this group was the significant, negative trend in attitude toward physical education. Both groups also were given a written examination about scientific principles of physical activity at the end of the term. The difference between groups was not significant although the developmental movement group's mean score was 6.21 points higher. The between-groups comparison must be interpreted with caution. Even though the improvements made by the developmental movement group were considerably greater than those made by the sports skills instruction group, there were far too many weaknesses in experimental design to specify the exact causes of such changes. When compared on sports skills performance tests, the sports skills instruction group excelled.

The difficult tasks required to individualize instruction in college physical education still lie ahead. However, the possibilities for individualization seem quite feasible and realistic. To say the least, a personalized approach to learning is critical to the survival of college programs. The first step toward individualized education is a commitment by the professional staff and a willingness to change dearly held beliefs and practices if such changes are required. Then teachers and administrators can withstand the challenges of stating behavioral objectives in various content areas, develop diagnostic and placement tests, prepare materials and learning prescriptions and create new kinds of information support systems. However, the *real* secret to individualizing instruction is for physical education to convert from double boilers to space-age cookery!

The Toledo Approach after Six Years: Is It Working?

Perry B. Johnson
University of Toledo

I. **Date: October, 1962**

Place: Exercise Physiology Research Laboratory, The University of Toledo, Updyke's and Johnson's connecting offices.

Observation: Most college required physical education programs, like Toledo's are (in alphabetical order): abominable, *archaic*, inexcusable, *relatively useless*, *sterile*, and unimaginative.

This Observation, if kept silent: harmless (also useless).

This Observation, if shared with others: very unpopular with most college physical educators; popular with some college physical educators; extremely popular with most college graduates and college students in required programs.

Conclusion: Do something about it.

Question: Who gives you the right to speak out and criticize, to initiate change?

Answer: Neither are rights; both are professional obligations.

Question: Where will you begin?

Answer: With the seed sown by Van Huss, Montoye, and Wessel and the Michigan State University program.

II. **Required college health and physical education**

In our view, it should be an experience by means of which a student can make an intelligent decision about health and physical activity in his life and acquire at least the beginnings of some basic skill which is ideally both satisfying and useful to *him* (if he does not already have such skill).

III. The University of Toledo Program

Initiated partially (and poorly) in 1962.

Initiated fully (and properly) in 1964, Dr. Stolberg coordinating.

Two courses, each two (2) semester hours, for men and women:

P.Ed. 108: physiology and physical fitness oriented—required of all freshmen.

P.Ed. 109: psychology, sociology, mental health oriented—required by one-half of the colleges on campus.

Approach: Factual; dispel myths: problem-solving inasmuch as possible; lecture one hour per week; laboratory two hours per week; emphasis on individual and his knowledge, not his athletic skills.

Change: Quarter system effective 1968; change to three quarter hours for each course; two hours lecture and two hours laboratory per week; (Improvement with two hours lecture per week; one per week leaves much to be desired for many obvious reasons).

Content: Though basic objectives have remained constant, courses have changed constantly during six years.

Current Example, P.Ed. 108: (coordinator, Burt; primary input and instruction, Drs. Burt, Johnson, Updyke, Stolberg, Cundiff, and Lamb).

Text: *Physical Education: A Problem-Solving Approach to Health and Fitness* (Holt, Rinehart, and Winston, 1966).

P.Ed. 108 Lecture and Discussion: (co-ed) (figures in parenthesis reflect approximate number of class periods, depending upon professor).

Introduction: mental fixation; knowledge as warranted and speculative generalizations; physical and mental take-it-easyism in U.S.A. (evidence, examples, class discussion) (2).

Understanding the heart; the ECG (1).

Cardiopulmonary resuscitation and other important emergency procedures.

Cardiovascular pathology (arterio- and atherosclerosis, hypertension, anemia, varicose veins) especially as related to exercise (1).

How to have a coronary (discussion of *all* factors statistically associated with coronary heart disease) (1).

Cardiovascular benefits of regular exercise (2).

Metabolism and work capacity (1-2).

Diet, exercise, and weight control (3-4).

The muscle myth (dispelling myths, an analysis and discussion of the proper significance of strength and muscular endurance as fitness elements; principles of improvement, etc.) (1-2).

Smoking, performance, and health (1-2).

Human sexuality (2-4).

P.Ed. 108 Laboratory Activities: (some co-ed sections)

ECG for each student; follow-up analysis of ECGs and discussion.

Film: "The Pulse of Life"; discussion.

Practice cardiopulmonary resuscitation using "Resusa Anns."

Cardiovascular Experiment: "The Activity Continuum and Work of the Heart"; data collection, analysis, reports, and discussion; synthesis.

Fitness Testing (for personal use only), including CV test (step test or Cooper Field Test).

Planning a CV fitness program; introduction to jogging.

Measurement of per cent body fat; diet-activity recall; discussion and synthesis.

Experiments with physiological effects of smoking.

Planning and conducting a *personalized* fitness program.

Current Example, P.Ed. 109: (coordinator, Harriet Williams; primary input and instruction, Drs. Williams, Drowatzky, Schendel, and Broekhoff)

Text: same as for P.Ed. 108, plus selected reprints (for example, from *Scientific American*).

P.Ed. 109 Lecture, Discussions, and Experiments (co-ed) (approximate number of class periods in parenthesis).

- Introduction to Motor Behavior: structure and function of the nervous system (3).
- Experiment, discussion, and synthesis: reaction time, movement time, and motor performance (2).
- Mental health and the mechanisms of stress (2).
- Experiment, discussion, and synthesis: stress related to physical and mental function (2).
- Natural antidotes for stress: rest, relaxation, and sleep (1).
- Artificial antidotes for stress: drugs and alcohol (2).
- The learning process (1).
- Perception: an overview (1).
- Experiment and synthesis: visual perception (2).
- Perception and motor performance (1).
- Personality and motor performance (2).
- The individual, society, and sport (2).

P.Ed. 109 Skills Laboratory Options: (each student selects a recreational activity with a potential for physical fitness achievement and maintenance).

- Swimming (co-ed).
- Fencing (co-ed).
- Badminton (co-ed).
- Handball (men).
- Conditioning (men) (women).

IV. Is It Working?

Question: (often asked during the last six years following presentations at meetings and article in the March, 1966, *JOHPER*): What is your evidence that your approach works?

Question asked by: many who were sincerely interested in the program and its potential; some who were honest skeptics; a few with closed minds seeking to destroy anything new.

Question not asked by: far too many "apathetics."

Answer: In my view, it is logical that any program resulting from honest, sincere effort, from real concern for the individual, from attention to the individual's needs, from a sane and realistic approach to physical activity, from respect for the student's intelligence and integrity, has to be better than the traditional approach.

Question: But what objective evidence can you offer?

Answer: Anonymous end-of-course evaluations have been utilized since the inception of the program. Even during its first full year in operation, when there were yet many bugs, 90% of the students felt that the courses should be required of all students and that they should not revert back to the traditional approach.

Question: Now, in its sixth year, how do the students react?

Answer: P.Ed. 108 (sample size: 1000); P.Ed. 109 (sample size: 122) Anonymous questionnaire at completion of course.

A. Compared with other college courses taken, this course was:

Lecture and Discussion					*Laboratories*			
	108	*109*				*108*	*109* (skills)	
	3%	6%		The least useful		12%	7%	
41%	21%	33%	68%	Of some value	49%	26%	23%	36%
	20%	35%		As useful as other courses		23%	13%	
56%	43%	23%	26%	Of more than average value	39%	30%	39%	57%
	13%	3%		The most useful		9%	18%	

B. Course evaluation, lecture and laboratory	*108*	*109*
1) The course was designed to indoctrinate	3%	4%
2) The course appeared to have a scientific base and was interesting but will probably effect no change in my behavior or living habits	33%	63%
3) The course appeared to be scientifically objective and was logically presented. I think that the course may result in a desirable change in my health behavior	64%	33%

Question: Practically speaking, what is your evaluation of the program from a faculty and administrative point-of-view?

Answer:

1) This program was directly responsible for the approval of the new building which now houses our entire health, physical education, recreation, and intramural operation; the building is devoted *entirely* to these programs.
2) College students are very interested in the content of the program.
3) The basic concepts of the program are well within the grasp of the so-called "average" college student.
4) The electrocardiogram can be given on a mass basis and at a rate of at least 25 per hour with two niso-cardiettes.
5) Cardiopulmonary resuscitation can be taught on a mass basis but constant repair of practice dummies must be expected.
6) A combination lecture and laboratory program enhances the learning process.
7) Instructors and graduate students can be trained to conduct the laboratory sessions with a minimum of difficulty, but our experience during summer sessions indicates that the ideal situation is one *professor* teaching both lecture *and* laboratory.
8) Only well-trained faculty members should attempt the lecture part of the course.
9) Constant revision, based on student and faculty evaluation, is essential.

Question: Do you know that your students change their attitudes? Do they actually change behavior with respect to health and fitness?

Answer: To me the questionnaire results imply a definite change in attitude and an encouraging intent to actually change behavior (especially in in 108 where overt behavior patterns like exercise and smoking are dealt with in the content of the course).

Question: But do they actually change behavior?

Answer: Some do, some don't; that is an honest answer.

Question: But if you can't point to measurable significant changes in "exercise habits," how are you so certain that your program is best?

Answer: (First, I have not implied that our program is *best*. I have said that I believe the *approach* has to be *better* than the traditional one. Even the earliest student evaluations bear me out on this. It is only our *approach*, not our specific program, that I wish to promote). Can I point to measurable significant changes in exercise and health behavior? No. The more recent surveys do indicate that the students believe that the knowledge and skills are *useful* and that they do not perceive the courses as indoctrination experiences. We know that their intelligence has not been insulted; that they have learned; that they have been given the opportunity and the knowledge with which to make an intelligent decision about exercise, smoking, recreation, etc.; that they feel what they have learned is useful; that they feel that their behavior *may* change. Therefore, as interested as we are in students' future behavior and well-being, as educators we have, in my opinion, achieved a most worthy objective with such a program, perhaps as much as one can realistically hope to achieve.

The President's Report

David O. Matthews

According to the rights and privileges granted to him by the Constitution, Operating Code, and Policies of the NCPEAM, your President has carried out the duties and obligations of his office in the following instances:

1) He appointed members to all committees insuring geographical representation and a balance of old and new members.
2) Chairmen of all committees were appointed and provided with copies of the operating codes of the committees.
3) He called and chaired the Spring meeting of the Executive Council which met in Boston during the AAHPER Convention.
4) He served as ex-officio member of all committees of the NCPEAM.
5) Committee reports were requested, secured, and reviewed three times during his year of office.
6) He worked with the President-Elect, Convention Manager, Section Chairmen, and Section Chairmen-Elect in the planning of the 73rd annual meeting of the Association.
7) He prepared the *Newsletter* and had copies sent to the membership.
8) A new representative of the Quest Advisory Board was appointed.
9) Working with Catherine Allen, President of NAPECW, he agreed to the appointment of Pearl Berlin to assume the chairmanship of the Quest Advisory Board upon the death of Rich Donnelly.
10) He requested and received permission from the Executive Council to coordinate efforts with the NAPECW to set up an educational display at the Seattle meeting of the AAHPER in April of 1970.
11) The AAUP was contacted and the NCPEAM is now listed as one of the educational organizations supporting the Statement of Principles on Academic Freedom and Tenure of the AAUP.
12) He attended the meeting of the WCMPES in Reno in order to obtain more opinions on the proposed restructuring of the Annual Meeting. A new structure would allow for a greater breadth of presentations.
13) He assisted the NAPECW in arranging for the deposit of that Association's historical records in the University of Illinois Physical Education Library (the Seward Staley Library).
14) He contacted ten or twelve Association members and requested them to represent the NCPEAM at the inaugurations of college and university presidents.

I wish to thank all of the individual members of our Association for their contributions to the operation of the business of the NCPEAM. Special thanks to Pat Mueller, Sheldon Fordham, and Chalmer Hixson for their considerable efforts in planning this present convention.

With the type of persons we have working for the Association, I am extremely confident that the NCPEAM is destined for a wonderful future to match its remarkable past.

Secretary-Treasurer's Report

C. E. Mueller

The following identifies some of the primary activities of the Secretary-Treasurer during fiscal year 1969.

1) As projected at the NCPEAM Convention in Durham, North Carolina, transferring the printing of the PROCEEDINGS from AAHPER to the University of Minnesota Printing Department resulted in printing and distributing the 72ND ANNUAL PROCEEDINGS in June, almost six months prior to earlier publication dates. If those making presentations at this year's convention will give section secretaries or me their manuscripts before leaving, it should again be possible to meet a mid-summer deadline.

2) The PROCEEDINGS were copyrighted for the first time.

3) Transferring the responsibility of printing and distributing the PROCEEDINGS from AAHPER to the University of Minnesota also resulted in increased revenue and better servicing of NCPEAM accounts. The computerized process used by AAHPER was impersonal to the extent that many libraries failed to receive back issues on standing orders. When current PROCEEDINGS were mailed, libraries requested that back orders be filled.

4) Changing the fiscal year from December 1st through November 30th to September 1st through August 31st and mailing out membership dues invoices streamlined the dues paying process to the extent that 976 members have already paid 1970 dues, two more than the total membership for fiscal 1969. Last year as of this date there were 231 members. The new dues invoice was also mailed to 1967 and 1968 delinquents and resulted in approximately 100 renewals from this potentially "lost member" category. Considerable confusion about when dues are due has been eliminated by this new procedure, and your cooperation and understanding in accepting it is very much appreciated.

5) The Operating Manual was completely up-dated and printed, the first such revision since 1964. The binding of the manual will permit changes to be printed and inserted without reprinting the entire document.

6) As directed by the membership at last year's Convention, placement information forms have been placed at the registration table for those who wish to record vacancies and for others who wish to identify themselves as applicants.

7) Copies of QUEST are now mailed directly from the Secretary-Treasurer's Office to late dues paying members, thus eliminating some of the delays that have occurred in the past.

8) To secure the savings and efficiency of the printing and mailing departments of the University of Minnesota, it is necessary to utilize University budgets and then reimburse them from the NCPEAM treasury. I would like to remind you that these procedures were made possible through the cooperation of the late Dr. Richard Donnelly, your Past President and the Director of the School of Physical Education at the University of Minnesota.

9) To those who have been so patient, cooperative, and understanding in your relations with the Secretary-Treasurer's Office, my sincerest appreciation is extended.

Membership Summary

	1968	1969*
Honorary Members	67	70
New Members	141	111
Renewals	801	793
Totals	1009	974

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* Fiscal 1969 was nine months.

STATEMENT OF CASH RECEIPTS, DISBURSEMENTS, AND FUND BALANCES FOR THE NINE MONTHS ENDED AUGUST 31, 1969

FUND BALANCE, DECEMBER 1, 1968		$ 2,643.37
RECEIPTS:		
Membership dues	$ 8,291.70	
Publication proceeds	1,230.65	
Reimbursed expenses	220.34	
		9,742.69
		$12,386.06
DISBURSEMENTS:		
Office supplies and expense	$ 47.44	
Secretarial and clerical	364.73	
Addressograph and mailing	737.58	
Printing	407.20	
Newsletters	338.28	
Proceedings, 1968	350.07	
Proceedings, 1969	4,299.68	
Quest monographs	2,832.00	
Convention expense	905.91	
Secretary-treasurer fees	700.00	
Officers expenses and fees	454.40	
Audit	200.00	
National Art Museum membership	200.00	
Bank charges and discounts	10.25	
Miscellaneous	78.00	
		11,925.54
FUND BALANCE, AUGUST 31, 1969		$ 460.52

SUMMARY OF FUND BALANCE

Checking accounts—The Champaign National Bank Champaign, Illinois	$ —
—University National Bank Minneapolis, Minnesota	$460.52

Convention Manager's Report
73rd Annual NCPEAM Conference

Sheldon Fordham

The following report is submitted as directed by the Operating Code Manual for the 73rd annual meetings of the NCPEAM.

Introduction

It was a pleasure to serve as host for the 73rd annual meeting of the NCPEAM. Many favorable comments were received from association members on the conference and there was excellent cooperation from hotel representatives meeting our needs. Special thanks are due the local planning committee for their efforts in implementing the many necessary details.

Committees

In May, 1969 a planning committee was appointed from the physical education faculty at the University of Illinois at Chicago Circle. These individuals and their assignments as follows:

Assistant Convention Manager—Bradley Rothermel
Registration—Leo L. Gedvilas
Publicity—Matthew Ellsworth
Hospitality and wives—Robert Beck and Charles Kristufek
Reception and Luncheons—William J. Penny

The hotel arrangements were negotiated with sales representatives and all details were completed by December 1, 1969. The local planning committee met a total of three times with the last meeting being held on December 1, 1969. All committee members were familiar with the total planning process and conference requirements.

Attendance Report on Conference and Special Activities

Paid members in attendance	233
Guests and wives	68
Total, including wives	301
*On bus tour of Chicago places of interest	23
Attended cocktail buffet	108
Attended luncheon	126
Participated in handball at Chicago Circle Campus	19

Committee Activities—General

The Convention Manager met three times with President Elect Hixson (May, 1969; September, 1969; and December, 1969) and close communication was conducted with President Matthews and Secretary-Treasurer Mueller. The main speaker at the final session, Alderman Ralph Metcalfe, was contacted by the Convention Manager and asked to speak at the Conference. Copies of the President's letter were mailed to deans and directors of all Illinois, Iowa and Indiana institutions of higher education late in November with an accompanying letter notifying them of the association meeting.

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* Specific places visited included Art Institute, Marshall Field & Company, Field Museum, Old Town, University of Illinois at Chicago Circle.

Recommendations for the Future

The following suggestions are made as a result of our experiences at the 73rd annual meeting.

1) Use the local institution's visual aid equipment and provide a competent operator for *all* sessions.
2) Insist on prior notification for all equipment needed. In some instances no advance request was made for equipment.
3) Arrange for some type of social activity during the evening pre-registration period (i.e. Sunday, December 27, 1970 from 5:00-8:00 p.m.).
4) Continue the practice of pre-registration the evening prior to opening sessions.
5) Insist on written agreements with hotels on luncheon, breakfasts, complimentary rooms, and room costs.
6) Begin *early* to make arrangements for general session speakers.
7) Begin *early* to make contacts for publicity purposes. We were not too successful in newspaper coverage and had no television exposure. A personal contact with the news media is most important.

The cooperation received from every officer in the Association was most gratifying and we were happy to have been a part of this venture.

Quest Advisory Board Report

Harold VanderZwaag

1) *Reprint Policy.* A fifty dollar ($50.00) fee is assessed for the reprint of any QUEST article which is to appear in a publication that sells for royalties. The one exception is that this does not apply to the reprint of articles that are published in non-English language publications.
2) Consideration is being given to another means of *numbering* the QUEST Monographs. The present numbering system will have the cumulative effect of being quite cumbersome over a period of time. NCPEAM members may submit suggestions to Larry Locke or Board Members.
3) Consideration is also being given to providing a location for Archives for QUEST.

Minutes, Executive Council

EXECUTIVE COUNCIL MEETING

BOSTON, MASSACHUSETTS
APRIL 14, 1969

MEMBERS PRESENT: Frank Bearden, Charles Kovacic, Andrew Kozar, Dave Matthews, C. E. Mueller.

OTHERS IN ATTENDANCE: James Delameter and Barry Pelton.

1) The meeting was called to order at 10:30 A.M., but no official action was taken due to the lack of a quorum.
2) Minutes of the last meeting were distributed.
3) President Matthews presented a progress report on the Chicago Convention and summarized reports of the various committees.
4) The Secretary-Treasurer reported on the financial and membership status of the Association.
5) The President will follow-up the recommendation that NCPEAM work in conjunction with NAPECW in sponsoring an educational exhibit at the AAHPER Convention in Seattle.
6) Seymour Kleinman submitted a petition to establish a Section on Sport and Physical Education Theory. President Matthews will write to him and suggest this group reserve time for a special interest meeting at the Chicago Convention.
7) King McCristal has been appointed to the QUEST Advisory Board.
8) Jim Delameter reviewed potential sites for the 74th Annual Convention.
9) Barry Pelton, Chairman of the ad hoc committee to investigate the possibility of NCPEAM merging with NAPECW, reported that the membership would be surveyed for their reactions.
10) The next meeting is scheduled for Saturday, December 27, 1969, at 7:00 P.M. in the Alhambra Suite of the Sheraton-Chicago Hotel, Chicago, Illinois.
11) The meeting adjourned at 11:50 A.M.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

EXECUTIVE COUNCIL MEETING

CHICAGO, ILLINOIS

DECEMBER 27, 1969

MEMBERS PRESENT: Frank Bearden, Robert Bland, Chalmer Hixson, Charles Kovacic, Larry Locke, Dave Matthews, C. E. Mueller, and Bob Salmons.

OTHERS IN ATTENDANCE: Sheldon Fordham, Will Holsberry, Carl Peterson, Dominick Taddonio, and J. Edmund Welch.

1) The meeting was called to order at 7:00 P.M. by President Matthews.
2) Minutes of the January 11th, 1969, and April 14th, 1969, meetings were approved as distributed.
3) The following committee reports were received:
    - a. Convention Committee—Fordham and Hixson
    - b. Historical Records—Welch
    - c. Research Committee—Matthews
4) Taddonio reviewed the recommendations of the Time and Site Committee. MOTION by Hixson, second by Bearden, that the 75th Annual Convention be held in New Orleans on January 6th-9th, 1972. PASSED.
5) President Matthews reported that Harold VanderZwaag replaced King McCristal on the QUEST Board. Pearl Berlin has assumed the chairmanship of the Board because of the death of Richard Donnelly.
6) The Executive Council reviewed the statement on Administrative Organization of Physical Education and Intercollegiate Athletic Programs presented by the Joint Committee on Physical Education and Athletics. MOTION by Hixson, second by Bearden, that the statement be referred back to committee for further study and clarification. PASSED.
7) The International Relations Committee requested the President to appoint a representative to attend a breakfast meeting at the AAHPER Convention in Seattle. The purpose of the meeting is to bring together individuals teaching college and university courses in comparative or international physical education.
8) President Matthews reported on behalf of the Operating Code Committee that the Secretary-Treasurer had up-dated the Operating Manual, the first such revision since 1964.
9) MOTION by Bearden, second by Hixson, that the Constitution Committee report be accepted with the exception of the recommended change in Article I, Section II, which is to be referred back to the Committee for further clarification. PASSED.
10) Kovacic presented the nominees of the Nominating Committee. MOTION by Kovacic, second by Hixson, that the nominations be accepted. PASSED.
11) The Secretary-Treasurer reviewed the membership and financial status of the Association.
12) President Matthews reported for the Membership Committee.
    - a. MOTION by Hixson, second by Fordham, that membership blanks should not be included in QUEST and the PROCEEDINGS. PASSED.
    - b. MOTION by Hixson, second by Bearden, that the classification of Honorary Membership be changed to Emeritus. Individuals must be a current member at retirement, and must have a minimum membership of 15 of the last 20 years. Exceptions to these criteria may be made by the Membership Committee or the Executive Council. PASSED.

c. MOTION by Locke, second by Fordham, that the 17 honorary members recommended by the Membership Committee be accepted. PASSED.

13) The Necrology Committee reported six deaths among the NCPEAM membership in fiscal 1969: James R. Clark, Nathan Taylor Dodson, Richard J. Donnelly, Joseph A. Nowotny, Canute Hansen, and Ellsworth E. Richardson.

14) The Policies Committee recommended the elimination of 2-g and 4-b under "Administering Association Affairs." The Council interpreted the scheduling of special interest groups at this year's Convention not to be in conflict with item 2-g because this refers to groups which do not relate to the best interests of the Association. The recommendation to delete 4-b was accepted.

15) Section Chairmen reviewed their programs for the Convention.

16) Pelton reported the results of a survey of the ad hoc committee which was appointed to explore the possibility of a joint meeting and/or amalgamation of NCPEAM and NAPECW.

17) MOTION by Kovacic, second by Bearden, that the Construction and Equipment Committee be discontinued. PASSED.

18) The meeting adjourned at 10:30 P.M.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

EXECUTIVE COUNCIL MEETING

CHICAGO, ILLINOIS
DECEMBER 28, 1969

MEMBERS PRESENT: Sheldon Fordham, Chalmer Hixson, Charles Kovacic, Larry Locke, Dave Matthews, C. E. Mueller, and Robert Salmons.

OTHERS IN ATTENDANCE: Carl Peterson and Carl Selin.

1) The meeting was called to order at 7:45 A.M. by President Matthews.

2) Minutes of the December 27th, 1969 meeting were approved as read.

3) Selin reported for the Joint Committee and reviewed the status of the statement on Administrative Organization, indicating that none of the Associations had endorsed the document.

4) The Secretary-Treasurer presented a proposed budget for 1970. MOTION by Hixson, second by Kovacic, that the proposed budget be adopted for 1970 pending a further report from the Finance Committee. PASSED.

5) MOTION by Bearden, second by Kovacic, that NCPEAM membership in the National Art Museum of Sport be discontinued. PASSED.

6) President Matthews raised the question of restructuring the Convention and recommended that the new President be authorized to appoint a committee to study reorganization, pending the outcome of special interest group meetings at this year's Convention.

7) The meeting adjourned at 8:45 A.M.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

EXECUTIVE COUNCIL MEETING

CHICAGO, ILLINOIS

DECEMBER 30, 1969

MEMBERS PRESENT: Sheldon Fordham, Chalmer Hixson, Will Hollsberry, Bob McAdam, Dave Matthews, Muska Mosston, C. E. Mueller, Carl Peterson, and Deane Richardson.

OTHERS IN ATTENDANCE: Sam Cooper, Arthur Gallon, Burris Husman, Larry Locke, King McCristal, Jesse Parks, Fred Roby, and J. Edmund Welch.

1) The meeting was called to order at 7:15 A.M. by President Hixson.

2) Minutes of the December 28th, 1969 meeting were approved as read.

3) After reviewing the success of the special interest groups at this year's Convention, it was recommended that they be continued at the 74th Annual Convention. Some of the comments related to these meetings included (a) meet earlier in the Convention schedule and keep the number small, (b) meetings are valuable, particularly for younger members, (c) papers presented at these sessions should not be included in the PROCEEDINGS, (d) a new title should replace "special interest groups," (e) discussion leaders should be briefed on the purpose of these meetings, (f) a request should be made through the NEWSLETTER to determine the kinds of special interest groups which are desired for next year's Convention.

4) McCristal explained the Big Ten Body of Knowledge project and solicited NCPEAM endorsement and financial support. MOTION by Matthews, second by Fordham, that NCPEAM endorse the Big Ten Body of Konwledge project and support it in the amount of two hundred dollars ($200.00). PASSED.

5) Roby requested a three-hour block of time at the 74th Annual Convention for Western Division meetings. MOTION by Richardson, second by Peterson, that the Western Division be allotted the time usually scheduled for the International Relations meeting. PASSED. In addition, the President-Elect will readjust time periods between meetings in an attempt to provide the requested time.

6) The Council agreed not to include the Legislative Committee report in the PROCEEDINGS because it was not representative of the Committee.

7) President Hixson will appoint two committees, one to study reorganization of the Convention program and the other to consider additional sources of revenue to finance the affairs of the Association.

8) MOTION by Richardson, second by Fordham, that the petition to establish a section titled "Sport and Physical Education Theory" be tabled. PASSED.

9) The Secretary-Treasurer was instructed to distribute membership application blanks as follows:
   a. Slip sheets should be placed in the PROCEEDINGS (Locke will contact the QUEST Board to ascertain whether application blanks may be placed in the QUEST Monographs).
   b. Mail applications to every college physical education department in the United States.
   c. Send fifty (50) application blanks to each Council member.
   d. Place an ad and/or an application blank in JOPHER if the cost is reasonable.

10) Parks raised the question of black membership and black involvement in the Association. The President will appoint a committee to study this question.

11) NCPEAM will co-sponsor an educational exhibit with NAPECW at the AAHPER Convention.

12) A luncheon meeting of the Executive Council will be held in Seattle at the AAHPER Convention at a time and date to be announced later.

13) The meeting adjourned at 9:00 A.M.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

Minutes, Association Business

FIRST GENERAL SESSION

CHICAGO, ILLINOIS
DECEMBER 28, 1969

1) The meeting was called to order at 4:05 P.M. by President Matthews.

2) President-Elect Hixson introduced the guest speaker, Dr. Charles Galloway, Professor of Education, The Ohio State University.

3) Matthews presented the annual President's Report.

4) The following reports were received:
   a. Joint Committee—Selin
   b. QUEST Advisory Board—VanderZwaag
   c. Convention Program—Hixson
   d. International Relations—Cordts
   e. Operating Code—Roberts

5) MOTION by Taddonio, second by Bearden, that the recommendation of the Time and Site Committee to hold the 75th Convention in New Orleans on January 6th-9th, 1972, be approved. PASSED.

6) David Bischoff presented a bound volume of QUESTS to Marv Eyler, past Editor of QUEST. Larry Locke presented an award to David Bischoff for his four years of service as Business Manager of QUEST.

7) The meeting recessed at 5:30 P.M. until 11:00 A.M., December 29, 1969.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

SECOND GENERAL SESSION

CHICAGO, ILLINOIS
DECEMBER 29, 1969

1) The meeting was called to order at 11:15 A.M. by President Matthews.

2) Kovacic, Chairman of the Nominating Committee, presented the following nominations:
President-Elect—Deane Richardson and Vernon Sprague
Member-At-Large—Sheldon Fordham and Warren Fraleigh
Secretary-Treasurer—C. E. Mueller

3) The results of the election were as follows:
President-Elect—Deane Richardson, Member-At-Large—Sheldon Fordham, and Secretary-Treasurer—C. E. Mueller.

4) The Secretary-Treasurer's report was approved as read.

5) The following Committee reports were received:
   a. Necrology—Johnson
   b. Public Relations—Borchardt
   c. Research—Singer
   d. Legislative Committee—Bearden made comments but no official report.

6) MOTION by Spurgeon, second by Bearden, that the Finance Committee Report be accepted. PASSED.

7) MOTION by Gustafson, second by Asprey, that the recommendation of the Policies Committee to delete item 4-b, "Cooperate with the AAHPER for publication of the Annual PROCEEDINGS," be accepted. PASSED.

8) Asprey presented the report of the Membership Committee.
   a. MOTION by Asprey, second by Mosston, that the following individuals be made Honorary Members: Willard Ashbrook, David Bartelma, Lysle Butler, H. Harrison Clarke, Thomas Cureton, Clarence Flory, E. E. Kaiser, Hyman Krakower, Paul Landis, Karl Lawrence, Hugh McCurdy, Lloyd Messersmith, Ralph Piper, Archibald Post, Lestle Sparks, George Van-Bibber, and Howard Way. PASSED.
   b. MOTION by Asprey, second by Richardson, that the classification of Honorary Membership be changed to Emeritus. Individuals must be a current member at retirement, and must have a minimum membership of 15 of the last 20 years. Exceptions to these criteria may be made by the Membership Committee or the Executive Council.
   c. MOTION by Husman, second by Malon, to amend the main motion to read "Exceptions to these criteria may be made by both the Membership Committee and the Executive Council."
   d. MOTION by Gustafson, second by Spurgeon, to refer the question back to the Executive Council.
   e. The MOTION to refer was DEFEATED, the AMENDMENT PASSED, and the MAIN MOTION PASSED.

9) Richardson gave the Constitution Committee report.
   a. MOTION by Richardson, second by Gustafson, to delete the last sentence of Article I, Section 2, "Active members, only, shall pay dues—as provided in Sections 2, 3, and 4 below." PASSED.
   b. MOTION by Richardson, second by Bearden, in view of the action by the Association regarding Emeritus Membership, all references in the Constitution to "Honorary" shall be changed to "Emeritus." PASSED.

10) Resolutions presented by Chairman Korsgaard were unanimously approved.

11) Old Business:
    a. Pelton reported the results of the survey to explore the possibility of a joint meeting and/or amalgamation of NCPEAM and NAPECW.
    b. MOTION by Mosston, second by Zeigler, that the NAPECW President should be informed of the results of our survey and ask them if they would be interested in conducting a similar survey to serve as a basis for further considerations. PASSED.
    c. Fraleigh requested a straw vote of the membership assembled on the first question of the survey which states "I am in favor of a joint professional meeting with NAPECW." President Matthews judged the show of hands to be approximately 50-50.

12) New Business: Flath invited the membership to the 74th Annual Convention in Portland, Oregon, and reported that the Western Division meetings would be held in conjunction with the Annual Convention.

13) The meeting adjourned at 1:15 P.M.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

Standing Committees

CONSTITUTION COMMITTEE

The members of the Constitution Committee were contacted regarding possible and needed changes in the Constitution. From this correspondence it was found that there was need for clarification of Article I, Section II (Membership and Dues). Two basic suggestions were obtained. One suggestion concerning membership was more restrictive than the other so I submitted both suggestions to the committee membership for a mail vote. Of the five members who voted, four favored the more restricted suggestion and one favored the less restricted statement. Although there are strong arguments concerning the less restrictive statment, I believe that it is my duty to present the more restrictive suggested change for action by the Executive Council. This change is as follows:

> DELETE THE LAST SENTENCE OF SECTION I. In SECTION II IT SHOULD READ—ACTIVE MEMBERS ARE MEN CURRENTLY ENGAGED IN TEACHING OR ADMINISTERING ONE OR MORE COMPONENTS OF COLLEGE PHYSICAL EDUCATION, MEN WITH COLLEGE TEACHING EXPERIENCE PURSUING GRADUATE STUDY, OR COLLEGE MALE TEACHERS IN ALLIED FIELDS.

In view of the action by the Association regarding Emeritus membership, all references in the Constitution to "Honorary" shall be changed to "Emeritus."

Respectfully submitted,
Frederick W. Bierhaus
Chairman

FINANCE COMMITTEE

The Chairman of the Committee initiated correspondence with the Secretary-Treasurer of the Association and obtained detailed information on separate expenditures and incomes of the Association for the past several years. Secretary-Treasurer Mueller also provided a proposed budget for the 1970 fiscal year. These materials were circulated by mail among the Committee membership and comments and critcisms were solicited. After comparisons of the data available on past budgets and consideration of the comments from Mr. Mueller concerning the proposed budget this Committee recommends acceptance of the 1970 budget as enclosed herewith.

The Committee desires to commend the Secretary-Treasurer of the Association, Clarence E. Mueller, for his willingness to provide the data for this Committee's work and for his successful efforts in making even more efficient the business affairs of the Association.

This Committee recommends that the officers of the Association take the necessary steps to seek solutions to the following problems:

1) The Association is not in a strong fiscal position, as indicated by the depletion of the investment funds and by our continued pressure to consider further increases in dues. It is strongly urged that expenditures be continually held at a minimum and that every effort be made to restore the previous strong fiscal position and to make headway in rebuilding our investment funds for uses in future emergencies or in developing new programs.

2) The Association has changed its fiscal year to correspond with the usual academic year, September 1 through August 30, although new budget proposals are currently being proposed and approved at the Association's annual meetings in each December. This means that the officers of the Association must function for several months without an approved budget authorizing expenditures of funds. It is recommended that the Executive Council consider ways and means of providing for an approved budget to cover the situation. One suggestion has been offered that the budget be made a year in advance so that, for example, the 1972 budget would be approved at the 1970 meeting of the Association. Such advanced budget preparation might introduce further inaccuracies in estimates of expenditures but would overcome the possible embarrassment of operating for several months without an approved budget.

3) This Committee recommends that no increase in dues be considered at this time but that all members accept responsibility for actively soliciting new members.

4) It is also recommended that the Executive Council consider the establishment of either a permanent or an ad hoc committee for the purpose of investigating other sources of funds for the Association's operation. Such sources might include programs urging members to present gifts of money to the Association or to name the Association in personal wills. In some instances it may be possible for persons performing contract research which is presented at the Association's meetings to include in their research contracts sums of money to be paid to the Association for publication in the *Proceedings*. There are undoubtedly other such sources which might be discovered and utilized.

PROPOSED BUDGET FOR 1970

BALANCE BROUGHT FORWARD		
1) Estimated Balance September 1, 1969		$ 550.00
RECEIPTS		
2) Membership dues	1100 @ $10.00	11,000.00
3) PROCEEDING Sales		1,000.00
	TOTAL RECEIPTS	$12,550.00
EXPENDITURES		
4) PROCEEDINGS		4,300.00
5) QUEST	1100 @ $3.00	3,300.00
6) NEWSLETTERS		350.00
7) Annual Meeting		900.00
8) General Operations		1,800.00
9) President's Contingency Fund		350.00
10) Secretary-Treasurer's Fee		700.00
11) Officer's Travel Fund		300.00
	TOTAL EXPENDITURES	$12,000.00
12) Estimated Balance August 30, 1970		$ 550.00

Respectfully submitted,
Eugene E. Stish
Chairman

INTERNATIONAL RELATIONS COMMITTEE

Members of the International Relations Committee have been busily engaged over the past several months in attempting to formulate some definitions relative to the terms "comparative education," "international education" and "international relations." We are also hopeful of developing suggested guidelines and standards for graduate courses in the area of comparative physical education. It is being proposed that after hearing from Dr. Kane at the Chicago Convention that we hold an open forum on this entire matter of definition and standards.

Respectfully submitted,
M. L. Van Vliet
Chairman

HISTORICAL RECORDS COMMITTEE

1) The major goal of the committee was accomplished in 1968. That goal was to establish policies on how the NCPEAM Historical Records Collection could be used by students and professors. These policies are printed in the 1969 *Proceedings*. The NCPEAM Historical Records Collection is now located in the Physical Education Library of the University of Illinois at Champaign.
2) A second goal was to secure a graduate student to write as a thesis the history of NCPEAM since 1950. This goal has not been realized.
3) Professor Thomas E. McDonough, Sr., a past president of NCPEAM, provided valuable correspondence concerning "CPEA." These files have been deposited in the NCPEAM Historical Records Collection.
4) Two copies of the Durham *Proceedings* have been added to the NCPEAM Historical Records Collection.

Respectfully submitted,
J. Edmund Welch
Chairman

MEMBERSHIP COMMITTEE

The main function of the committee was to recruit qualified members for the association. This was accomplished by two methods.

1) Assigning to each member of the committee various states in which to recruit (please note first page). In turn, each committee member was to use, with their appointed state members, sample recruitment letters prepared by the chairman of the NCPEAM membership committee and the membership application flyer.
2) By sending via the secretary-treasurer to each current NCPEAM member a membership flyer and a letter urging him to recruit a qualified colleague for NCPEAM membership.

These two methods were apparently successful since the secretary-treasurer reported that as of December 9, 1969,

> "There are 84 new members, as opposed to 111 for fiscal 1969, a nine-month period. One of the most encouraging aspects of NCPEAM membership is the fact that the new fiscal year combined with the membership dues invoice has resulted in over 900 members compared with 974 members for the last fiscal year. It appears we are on the way to breaking the all-time record of 1,009 members, which was set in 1968. In the proposed budget for 1970, I have projected 1,100 members, and I believe this is a very realistic goal."

The committee also studied and attempted to formulate or further define the criteria for honorary membership status in NCPEAM. Section 4, Article I of the BY LAWS of the NCPEAM Constitution states:

> "Honorary Life Membership may be conferred upon active members or former active members by a two-thirds (2/3) affirmative vote at a regular business meeting. Honorary life members shall enjoy all the rights and privileges of active members except the payment of dues."

Last year's membership committee chairman stated that "It is obvious from the correspondence received and the nominations made that the criteria—no restriction on nomination—has and is now being used."

The committee's responses to specific questions concerning such criteria are contained in Appendix A. The tentative criteria thus formulated were as follows:

1) That in addition to a regular membership status the NCPEAM have both an honorary and an emeritus membership class.

2) That honoray membership be offered only to those who meet the following criteria:
   a. have given at least above average service to NCPEAM,
   b. have given extraordinary service to Physical Education and allied fields,
   c. are not nor have ever been a member of NCPEAM, and
   d. have been recommended for this membership status by a NCPEAM member and have been approved for this membership by a majority vote of the Membership Committee (or a Special Awards Committee).

3) That the emeritus membership be offered only to those who meet the following criteria:
   a. Have recently retired from [or will retire within the next academic year?] from a long-time college professional position in physical education.
   b. Have performed at least average service to the NCPEAM and to physical education and allied fields. [A suggestion was offered that membership in the NCPEAM constitutes average service. Another suggestion was that a longer length of membership should be required of those who have not performed above average service to NCPEAM.]
   c. Have a minimum of *10 years of consecutive* [?] membership in the NCPEAM *just prior to professional retirement.*

The tentative criteria for emeritus (honorary) membership were listed in a letter sent to all NCPEAM members and seeking their recommendations of other members who would qualify for emeritus membership. The members were also invited to comment on the tentative criteria. Only six responded. The gist of their comments were (1) average service should at least involve the chairmanship of an NCPEAM Committee, (2) average service should include attending a minimum of four NCPEAM Conventions, (3) an emeritus membership should not exist but honorary membership status should be retained and awarded only for outstanding service, and (4) three responded that the idea of and criteria for emeritus membership were excellent ones.

Twenty-eight names were submitted for consideration for honorary (emeritus) membership. Twenty-four former members appear to meet the criteria and hence are recommended for discussion and consideration by the Executive Council. Their names are contained in Appendix C.

Selected former NCPEAM members who had dropped their membership for the past two years were asked by the chairman why they had not renewed. The responses to this question are contained in Appendix B.

Based on the work and correspondence of the Membership Committee, the following recommendations are made.

1) Consideration of geographical location should be given in making appointments to the NCPEAM membership committee.
   Comment: Assignment of states is somewhat complicated since the dispersement of members on the committee is not even.

2) Include an NCPEAM Membership Blank in *Quest* and *JOHPER.*
   Comment: This is a repeat of a recommendation made last year.

3) That specific criteria be formulated concerning qualifications that must be met for honorary (emeritus) life membership and that these criteria be voted on by either the Executive Council or the general membership.

4) That the term honorary life membership be changed to emeritus membership.

5) That the Executive Council consider awarded honorary NCPEAM membership to non-members who have performed outstanding service to the profession.

Respectfully submitted,
Donald R. Casady
Chairman

NECROLOGY COMMITTEE

In February 1969, letters were mailed to committee members asking each of them to be responsible for a specific number of states which they would survey to obtain information for memorials to be presented at the annual meeting in December 1969. Suggestions for state contacts and for the preparation of memorials were included. A follow-up letter was mailed to the commmittee members in September and a third letter was mailed in October. Several telephone calls and individual contacts were also made. Each committee member responded and reports were submitted to the Chairman. The Secretary-Treasurer, C. E. (Fat) Mueller, also forwarded information on deceased members.

At the time of this report, six deaths among NCPEAM membership have been reported:

James R. Clark
Nathan Taylor Dodson
Richard J. Donnelly
Joseph A. Nowotny
Canute Hansen (honorary member)*
Ellsworth E. Richardson (honorary member)

Memorial statements have been prepared and edited for Clark, Dodson, Donnelly, Nowotny and Richardson and certificates will be prepared and sent to the nearest of kin.

The Chairman wishes to express appreciation to the members of the Necrology Committee, Ralph Ballou, Leo Gedvilas, Clair Jennett, John LeBar, and John Swalec for their efforts during the year. Thanks are also due to other members of the association who assisted in the work of the committee.

Respectfully submitted,
Ralph H. Johnson
Chairman

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* No information available.

James R. Clark (1905-1969)

James R. Clark of 1506 Ridgewood Drive passed away on Thursday evening, June 26, 1969 at Sartori Hospital, Cedar Falls, Iowa.

Dr. Clark was born March 30, 1905 in St. Peter, Minnesota, the son of Charles H. and Grace Clark and was married to Gertrude Johnston on July 18, 1929 in St. Peter, Minnesota.

He won honors as an all-state football player in Minnesota and as an all-conference college lineman at Gustavus Adolphus College, a member of the Minnesota Intercollegiate Athletic Conference.

Dr. Clark received the B.A. degree from Gustavus Adolphus College in 1927, his M.A. from Columbia University and Ph.D. degree from George Peabody College for Teachers, the latter in 1950.

At Mankato State College, Dr. Clark was Head of the Department of Physical Education and Athletic Director as well as the head coach in football, basketball, and track for several years. At George Peabody College in Nashville, Tennessee, he did part-time instruction in physical education while working toward his doctorate. He also taught and coached in public schools of Minnesota and at Rochester Junior College for several years.

In 1949, Dr. Clark joined the U.N.I. faculty after having served at Mankato State College in Minnesota. He was the head coach of golf from 1953 to 1964 and also assisted in football, basketball and track.

At the time of his death, Dr. Clark held the rank of Professor of Physical Education for Men and was the Administrative Assistant in charge of undergraduate and graduate physical education in the Men's Department at the University of Northern Iowa.

Dr. Clark was a member of St. Timothy's church, St. Peter's Lodge AF and AM, Cedar Falls Chamber of Commerce, American Association for Health, Physical Education and Recreation, Phi Delta Kappa, Cedar Falls Recreation Commission, Iowa State Education Association, National College Physical Education Association for Men and was a first aid and water safety instructor for the American Red Cross. He has served as a member of the U.N.I. Campus Planning Committee since 1966.

Nathan Taylor Dodson (1922-1969)

Nathan Taylor Dodson was born July 15, 1922 in Rockingham County, North Carolina, and was one of twelve children of William G. and Lula Dodson. He died on August 13, 1969, of a heart attack. Dr. Dodson collapsed while jogging on the university track to get in physical condition to serve as a sports official and to meet the rigors of his position as Professor of Physical Education and Director of Intramurals at Wake Forest University. He had a previous history of a heart valve defect dating back to almost 18 years, and known only to close relatives and a few intimate friends. In spite of this knowledge of his condition, he participated fully and unhesitatingly in the many activities which became a trademark of his life—in his family, his church, the community, his university, and his profession.

He attended Berea College and Duke University and later obtained the B.A. and the M.S. degrees from the University of North Carolina at Chapel Hill. He earned the Director's and the P.E.D. degrees from Indiana University. He served as a physical training instructor with the U.S. Marine Corps during World War II. His work as professor of physical education was characterized by a personal concern for his students and devoted enthusiasm for the professional organizations at the local, state, district and national levels. He was affiliated with thirty-two professional organizations and associations. He was a past president of the Southern District AAHPER and represented it on the Board of Directors. At the time of his death, he was Past Vice President of Physical Education Division of the AAHPER. He was a member of Phi Beta Kappa, Phi Epsilon Kappa and was a recipient of the Southern District Honor Award. His productivity as a scholar is permanently inscribed in a record of forty-nine published articles, as well as several valuable unpublished reports of his research.

Taylor Dodson meant so many things to so many people in physical education, athletics, recreation, camping, and sports officiating. His life was invested in the service of mankind and he exemplified the spirit embodied in his university's motto, *Pro Humanitate*. The following quote is taken from an editorial which appeared in the Winston-Salem Journal Sentinel. It expressed in some terms the spirit and acclaim of our friend and colleague.

> "Nathan Taylor Dodson, Wake Forest University Professor of Physical Education, died as he had lived: actively and courageously.—In his death as in his life there is an example for all of us: to live with our handicaps in fullness and hope."

Richard J. Donnelly (1919-1969)

Richard J. Donnelly, Professor and Director of the School of Physical Education of the University of Minnesota, was killed on October 3, 1969 in an airplane crash at Denver, Colorado.

Professor Donnelly was born in Allen, Michigan. He received the B.S. degree in Physical Education in 1942 from Michigan State Normal College, Ypsilanti, and started teaching and coaching at Hillsdale High School, Michigan. During World War II, he served with the United States Navy, 1942-45, attaining the rank of Lieutenant.

In 1945-46, he was a graduate assistant at the University of Michigan while completing studies for the M.A. degree. The following year, he was a teacher and head football and basketball coach in the Dexter, Michigan secondary school, and then he returned to the University of Michigan for doctoral studies. He received the Ph.D. degree in 1953 and became Associate Supervisor of Physical Education and Administrative Assistant.

Dr. Donnelly joined the faculty of the University of Minnesota in 1955, appointed first as Associate Professor and Coordinator of Graduate Study in Physical Education for Men and later (1959) as Professor and Chairman of Physical Education for Men and Assistant Director of Physical Education and Athletics. He was selected in 1963 as the first director of the newly organized School of Physical Education. He had provided effective leadership in the establishment of this School, a unit in the College of Education which includes the departments of Physical Education for Men, Physical Education for Women, Recreation and Park Administration, Intramurals for Men, Intramurals for Women, and a program in Health Education.

Regionally and nationally, Dr. Donnelly was a distinguished member of his profession. He was a past-president of the National College Physical Education Association for Men and served on this organization's committees for Tests and Measurements, Curriculum Research, Membership, and Operating Code. In the American Association for Health, Physical Education and Recreation, he had been a member of the Editorial Board, secretary of the Measurement and Evaluation Section, chairman of the Professional Education Subsection on Physical Education, and member of the Committee to Develop a Plan for Graduate Recruitment. His work was especially notable as secretary-treasurer of the Central District Association for Health, Physical Education and Recreation in which he also had been chairman of the Research Section. In 1966, he received the Central District Association Honor Award in recognition of his outstanding service to the profession. For the Minnesota affiliate, he chaired the Research Section and the Student Section. He was a member of several additional professional groups, including the American Association of Higher Education and the American Educational Research Association.

For seven years, Dr. Donnelly was a member of the Steering Committee for the Minnesota Governor's Advisory Physical Fitness Council, and he was co-chairman of the planning committee for the Governor's Workshop on Physical Fitness, 1958-59. He served for five years on the Minnesota State Board of

Education Advisory Committee on Health and Physical Education.

He was widely respected for his research and writing, and he was in constant demand as a speaker for conferences and meetings of professional groups.

Everyone who worked with Rich Donnelly had confidence in his judgment and his leadership. His assessment of problems was unusually perceptive, and his search for solutions was both far-sighted and practical. His colleagues trusted him, and he deserved their trust. He is greatly missed, but the University and the profession bear his mark, and cherished memories of his warmth and friendship remain.

Joseph A. Nowotny (1908-1969)

Joseph A. Nowotny, a member of the University faculty for 26 years and most recently Supervisor of the St. Paul Gymnasium, University of Minnesota, died on Sunday, June 22, 1969 at the age of 61.

He was born on January 18, 1908 in Arlington, Minnesota. He attended high school in Arlington, received a B.S. degree in physical education in 1932 from the University of Minnesota, and a M.Ed. in 1950. As an undergraduate, Mr. Nowotny won his varsity "M" in basketball. After graduating, he taught and coached two years at Alden, Minnesota. From there he moved to Marshall, Minnesota where he taught physical education and coached football and basketball.

Mr. Nowotny joined the School of Agriculture faculty on the St. Paul campus in 1943 as an instructor. He was promoted to assistant professor in 1946 and to associate professor in 1958. During his tenure with the School of Agriculture, Mr. Nowotny served as coach of the athletic teams for the School. As "Gym teacher and Coach," Mr. Nowotny won many lasting friendships with the farm boys from across Minnesota who attended the School of Agriculture sessions.

In 1960 the Physical Training Department which Mr. Nowotny headed was incorporated into the Department of Physical Education and Athletics for Men. Even before that, however, Mr. Nowotny offered physical education classes in the Gymnasium for the University students on the St. Paul campus. He also was responsible for promoting a vigorous intramurals and recreation program in the gymnasium.

Mr. Nowotny was active in several professional associations. He was a member of the American Association for Health, Physical Education, and Recreation and the Minnesota affiliate with the same name, the National Education Association, the National Intramural Association. He joined the National College Physical Education Association for Men in 1964.

Mr. Nowotny was a very humble and sympathetic man. He never hesitated to go out of his way to help faculty, staff, students, and their friends. He always assisted with the state meetings of the Future Farmers of America and the American Legion Boys State. He was teacher and coach to the countless youngsters in the St. Anthony Park and University Grove areas, many of whom learned to swim under his careful tutelage through the General Extension swimming classes held in the Gymnasium. Perhaps most important of all, Mr. Nowotny was a real friend of the many faculty and staff on the St. Paul campus, especially those who participated in the recreational activities in the Gymnasium.

Ellsworth E. Richardson (1906-1969)

Ellsworth E. "Red" Richardson '27, director of physical education and athletics at Amherst College since 1961, died on June 23 at the age of 63.

A native of Littleton, N.H., where he prepared for college, Red remained at Amherst as a Hitchcock Fellow in Physical Education following his graduation and then was made an instructor. He earned his Master's degree from the College in 1932. From 1936 until his return to Amherst as an assistant professor in 1943, he was director of athletics at Beverly (Mass.) High School and at Suffield Academy, Suffield, Conn. He became a full professor in 1955.

As a student, Red excelled in football; in his senior year Amherst lost only one game—to Princeton by one touchdown—and won the Little Three title. After his graduation he continued an active interest in the sport by playing center with the semipro Northampton "Red Devils" for a few years. He was also captain of basketball and a member of Alpha Delta Phi.

Besides his administrative duties, Red was golf coach and had also served as coach of hockey and assisted in other sports. For a period of years, he was in charge of Commencement arrangements.

Red devoted his life to athletics at Amherst and in so doing set an example of competitiveness, honesty, and sportsmanship for his students, colleagues, and opponents alike. The coach of an adversary hockey team commented: "Red was a tough competitor, but he always went by the rules. He never showed one ungentlemanly characteristic—even under the most trying circumstances. He epitomized everything a college coach should be."

OPERATING CODES COMMITTEE

As prescribed in the Operating Manual of the National College Physical Education Association for Men the business of the Operating Codes Committee, 1969 was conducted by correspondence.

In a memorandum dated September 30, 1969 the Chairman brought to the attention of the Committee members three duties explicitly outlined for the committee by the Operating Code. These duties were defined as:

1) to maintain an up-to-date operating manual.
2) to review the operating manual and recommend changes to the Executive Council.
3) to prepare an annual report for presentation to the Executive Council at the annual meeting.

In reference to the first of these duties it was noted that Secretary-Treasurer Mueller, in correspondence with the Chairman, had indicated that a complete revision of the Operating Manual was in process, incorporating all changes adopted for the Manual subsequent to the writing of the January, 1964 edition and that the revised Manual would be available for the 1969 annual meeting.

In regard to the second responsibility each member of the committee was requested to secure a copy of the present Operating Manual, review it individually, and communicate to the Chairman suggested changes or points which should be re-examined by the Committee. In addition it was suggested that committee members individually solicit suggestions for changes from NCPEAM members. Furthermore, the policy pursued by previous Operating Code Committees of soliciting suggested revisions from Association Officers, Section Chairmen, and Chairmen of Standing Committees was followed through the sending of a memorandum dated September 30, 1969, a copy of which is attached to this report.

By December 1, both the poll of Operating Code Committee members and the poll of Officers, Section Chairmen, and Standing Committee Chairmen resulted in some responses but no suggested revisions or suggestions of points for re-examination had been received. Therefore, the Operating Codes Committee, 1969 recommends no changes for the Operating Manual at this time.

The Operating Codes Committee also wishes to offer commendation to the Secretary-Treasurer for accomplishing the arduous but much-needed task of updating and reprinting the Operating Manual.

Respectfully submitted,
John A. Roberts
Chairman

POLICIES COMMITTEE

Recommended Policy Changes

Administering Association Affairs

4.6 Cooperate with the AAHPER for publication of the annual Proceedings.
Recommend the deletion of this section.
Rationale: Pat Mueller reports that the relationship with AAHPER has been discontinued and that Proceedings are now printed at the University of Minnesota.

W. F. Gustafson
Chairman

PUBLIC RELATIONS COMMITTEE

I. Pre-Convention Activities of the Public Relations Committee

A. Upon suggestion of the Chairman of the Public Relations Committee, David O. Matthews, President of NCPEAM, took time from his busy schedule to attend the Western College's Men's Physical Education Society meeting in Reno, Nevada, October 23-24, 1969. At this meeting it was voted upon and passed that the WCMPES will convene jointly with the NCPEAM in Portland, Oregon, next December (1970).

B. In September of 1969 the managing editors of *JOHPER* and the *Physical Educator* publications were requested to spot announce the regional and national meetings of NCPEAM and the WCMPES. Both requests were granted.

C. In December of 1969, the wire service was used in announcing the annual meeting. The information contained in the last two paragraphs of the *NCPEAM Newsletter* was the subject of the dispatch.

D. In December of 1969, the managing editors of several prominent Chicago newspapers were sent copies of the 73rd Annual Conference (*Newsletter*, Volume 9, No. 3, October, 1969).

II. Convention Activities of the Public Realtions Committee

A. The Committee shall utilize all of the foregoing available services to disseminate newsworthy items in connection with the Conference.

B. The Committee shall convene, if possible, to consider recommendations pertinent to its function.

III. Post-Convention Activities of the Public Relations Committee

A. It is recommended to the membership that all reports, speeches, research papers, and attendance at this conference be reported to their college and/or university publicity outlets.

B. All information gathered by this committee shall be turned over to the next Chairman of the Public Relations Committee.

IV. The Committee wishes to extend special commendations to David O. Matthews, President; Sheldon Fordham, Convention Manager; C. E. Mueller, Secretary-Treasurer; Chalmer Hixson, Convention Program Chairman and President-elect; and all participants who have given so much of their time and effort to make this conference an outstanding success.

Respectfully submitted,
John W. Borchardt
Chairman

RESEARCH COMMITTEE

The Committee has consolidated ideas and would like to initiate three projects during the coming year. They are best explained by the letters which would go to all departments of physical education.

Furthermore, the Committee has voiced concern over not having a say in the planning of the Research Section Meetings. The members would like to work with Section Chairman in developing the structure of these annual meetings. Executive Council action is probably required to implement this policy, and therefore it is the wish to the Committee that the Council discuss the issue.

Respectfully submitted,
Robert N. Singer
Chairman

RESOLUTIONS COMMITTEE

Your Resolutions Committee presents the following resolutions for your consideration:

1) A resolution recognizing "QUEST."
2) A resolution commending the President's Council on Physical Fitness and Sports.
3) A resolution commending and requesting continuing federal support for physical education.
4) A resolution on racism.
5) A resolution of commendation for those responsible for the 73rd Annual Conference of the NCPEAM.

ONE

WHEREAS The publication Quest, a joint effort of the National Association for Physical Education of College Women and the National College Physical Education Association for Men, has, in its brief five-year history, rapidly ascended into an extremely fine publication of the highest caliber and has made a unique and needed contribution to the body of knowledge in physical education; and

WHEREAS This publication reflects considerable thought, effort, and dedication by not only the authors of the articles contained therein, but of the editors, associate editors, advisory editors, editorial consultants and business managers therefore, be it

RESOLVED That the NCPEAM express its appreciation, commendation, and congratulations to those responsible for this extraordinary publication.

TWO

WHEREAS The President's Council on Physical Fitness and Sports has completed fifteen years of service, and

WHEREAS This Council has been instrumental in the furtherance of an interest in the fitness levels and the sports development of thousands of American youths and adults and has been effective in the creation of and motivation for positive programs which enhance the field of physical education, therefore, be it

RESOLVED That the NCPEAM recognize and commend the concept and achievements of the Council and the many individuals who have contributed to the objectives of the Council and furthered the advancement of physical education. We urge the continuance of the Council and its promotion of physical fitness and sports.

THREE

WHEREAS The 89th and 90th sessions of Congress and President Lyndon B. Johnson have visibly and tangibly shown their interest in and support of education as manifested by the several funded programs of the Federal Government, and

WHEREAS These programs have made it possible to provide physical education experiences, facilities, and personnel that would not have been possible without such support, therefore, be it

RESOLVED That the National College Physical Education Association for Men commend the Congress and President Lyndon B. Johnson for their support of education, and by this action express its appreciation, and do urge the 91st Congress to continue this level of support, and be it directed

That the President of the NCPEAM be enjoined to forward a copy of this resolution to Lyndon B. Johnson, the Senate, and the House of Representatives.

FOUR

WHEREAS Public attention has been directed to the problem of racism in many facets of American life, including education and sports, and

WHEREAS Racism is not conducive to the best interests of America, sports, education or individuals, therefore, be it

RESOLVED That the NCPEAM endorse any positive action in the fields of physical education, intramurals, sport recreation, varsity sports, or professional sports which would directly or indirectly overcome the damaging effects of racism; and, be it further resolved

That all professional personnel of these fields strive to seek out and abolish racism wherever it may be found in these fields.

FIVE

WHEREAS This has been a very successful Annual Meeting, and

WHEREAS Planning for transportation, boarding, housing, and recreation of the membership and wives of members was effectively carried out; therefore, be it

RESOLVED That the members of the NCPEAM extend their sincere appreciation and thanks to:

The Convention Manager, Sheldon Fordham, and his Committee,

The Convention Program Chairman, President-Elect Chalmer Hixson,

The section chairmen and section chairmen-elect, officers, participants and speakers,

The management and employees of the Sheraton-Chicago Hotel,

The Chicago Convention Bureau Incorporated, and

All others who contributed to the success of the 73rd Annual Meeting.

Respectfully submitted,
Bob Korsgaard
Chairman

President's Committees

TIME AND SITE COMMITTEE

1) It is our recommendation that the city of New Orleans, Louisiana be selected as the site for the convention; that Dr. Harvey Jessup of Tulane University be requested to serve as convention manager; and, that the dates January 6-9, 1972 be considered.

2) The selection of the host city has the unanimous approval of this committee.

3) Dr. Jessup has indicated an interest and willingnes to serve in any capacity of leadership requested of him. In addition, he has discussed the possibilities of the convention with people in the New Orleans area and indicates that the dates recommended above would probably be the best possible, although a Saturday, Sunday, and Monday convention on the same weekend probably would be just as convenient.

James Delameter
Chairman

AD HOC COMMITTEE TO REVIEW POTENTIAL NCPEAM - NAPECW JOINT MEETING

At the final general session of the NCPEAM in Durham, North Carolina, 1969, several members spoke to the possibility of exploring a joint meeting and/or amalgamation of NCPEAM and NAPECW.

Shortly after this meeting, Dr. Dave Matthews, President, NCPEAM appointed an ad hoc committee to survey the attitude of the membership of NCPEAM concerning the following questions.

This report represents the results of the committee's survey. Reasons for selecting a particular response were solicited and no attempt was made to summarize these responses. They appear verbatim in the Secretary-Treasurer's file.

Question number One: I am in favor of a joint professional meeting with the NAPECW. Yes 230 No 72

Question number Two: I am in favor of eventual amalgamation of the NCPEAM and NAPECW. Yes 140 No 124 Undecided 23 No Response 15.

Respectfully submitted,
Barry C. Pelton
Chairman

Joint Committee

JOINT COMMITTEE ON PHYSICAL EDUCATION AND ATHLETICS — NCPEAM, NCAA, AAHPER

1) The NCPEAM Representative, Captain Carl W. Selin, USCG, has served as Chairman of this Joint Committee for this year.

2) The National Association of Collegiate Directors of Athletics declined the invitation to join the Joint Committee.

3) All of the groups comprising the Joint Committee, NCAA, AAHPER and NCPEAM have published in their manuals the report on "Statement on Administrative Organization of Physical Education and Intercollegiate Programs."

4) The next meeting of the Joint Committee will be 12 January 1970 at the NCAA Annual Meeting in Washington, D.C.

5) Any agenda items which should be considered by the Joint Committee should be presented to one of the NCPEAM representatives on this Committee at the earliest opportunity.

Respectfully submitted,
Carl W. Selin, USCG
Chairman

CONSTITUTION
NATIONAL COLLEGE PHYSICAL EDUCATION ASSOCIATION FOR MEN

ARTICLE I — NAME

Section I — The organization shall be known as the NATIONAL COLLEGE PHYSICAL EDUCATION ASSOCIATION FOR MEN.

ARTICLE II — OBJECTIVES

Section I — Objectives of the ASSOCIATION relate to the advancement of physical education in institutions of higher learning, including: the basic instructional program; intercollegiate athletics; intramural athletics; research; teacher education; and such other activities as may be assigned to a given college department. More specifically, the objectives are:

a. To improve the contributions of physical education, and where appropriate, the related fields of health education and recreation, to higher education.
b. To identify and define major issues and problems confronting the profession, particularly those of higher education, and resolve them to the best possible ends.
c. To gather, analyze, interpret, and organize the research needed to resolve the major issues and problems facing the profession of physical education, especially those which are concerned with higher education.
d. To develop interdisciplinary relationships with kindred fields of knowledge for the light they may shed on the nature and values of physical education (e.g., anthopology, psychology, sociology, sports medicine, etc.).
e. To improve public relations through increasing public understanding of the nature and purposes of physical education in American and world life.

ARTICLE III – MEMBERSHIP

Section 1 – The ASSOCIATION shall consist of members as hereinafter provided.

ARTICLE IV – GOVERNMENT

Section 1 – The government of the ASSOCIATION shall be vested in an Executive Council, officers, committees, and members as hereinafter provided.

ARTICLE V – WESTERN DIVISION

Section 1 – The Western College Men's Physical Education Society, consisting of college physical educators in the thirteen western states, shall be known as the Western Division of the National College Physical Education Association for Men (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming).

ARTICLE VI – SECTIONS

Section 1 – The ASSOCIATION may establish sections within its organizational structure as hereinafter provided.

ARTICLE VII – MEETINGS

Section 1 – The ASSOCIATION shall conduct annual and special meetings as hereinafter provided.

ARTICLE VIII – AMENDMENTS

Section 1 – This Constitution may be amended at any regular or special meeting of the ASSOCIATION, or by mail vote. A favorable vote of three-fourths (¾) of the members present at a regular or special business meeting, or a majority of the current membership by mail vote, shall be required for amendment; no mail vote shall be valid beyond thirty (30) days after official notification. In either case (regular or special meeting) a quorum must take action as hereinafter provided.

BY-LAWS

ARTICLE I – MEMBERSHIP AND DUES

Section 1 – There shall be two (2) types of membership: active members and emeritus life members. All members shall have equal voting privileges.

Section 2 – Active members are men actively engaged in teaching or administering one or more components of college physical education, men with teaching experience pursuing graduate study, or men engaged or interested in allied fields.

Section 3 – Active membership dues shall be ten dollars ($10.00) per fiscal year – as provided in Article XI, Section 5 – payable to the Secretary-Treasurer upon official notification by him. Members delinquent in their annual dues for a period of one (1) year shall be dropped from the rolls; re-instatement consists of paying the annual current dues.

Section 4 – Emeritus membership may be conferred upon members by a two-thirds (2/3) affirmative vote at a regular business meeting. An individual must be a current member at retirement and have a minimum membership of 15 of the last 20 years. Emeritus members shall enjoy all the rights and privileges of active members but will not pay dues.

ARTICLE II — EXECUTIVE COUNCIL

Section*1* — The Executive Council shall consist of the President, President-Elect, the immediate Past President, the Secretary-Treasurer, one (1) Member-at-Large, and all elected Section Chairmen as provided in Articles III, IV, and VI below. All members of the Executive Council shall have equal voting powers. Any person holding office in the ASSOCIATION must be an active member.

Section 2 — The Executive Council shall manage the general affairs of the ASSOCIATION, except as hereinafter specified. These general affairs shall consist of: (a) fulfilling directives given to it by the membership at the annual business meeting, or by mail vote; (b) presenting matters of policy to the membership at the annual business meeting, or by mail vote, for adoption or ratification; (c) acting for the ASSOCIATION between annual meetings; (d) maintaining an active professional program through the year; and (e) making appointments to fill vacated offices not otherwise provided for.

ARTICLE III — OFFICERS AND DUTIES

Section *1* — Officers of the ASSOCIATION shall consist of the President, President-Elect, and Secretary-Treasurer. Any person holding office in the ASSOCIATION must be an active member.

Section 2 — The President shall preside at all ASSOCIATION and Executive Council meetings, and appoint all committees as prescribed in Article IX. He shall call and make appropriate arrangements for the place and conduct of all meetings of the ASSOCIATION and Executive Council as provided in Article VII. He shall supervise the program planning for all ASSOCIATION meetings as provided in Section 3 below. He shall provide for an annual audit of the Secretary-Treasurer's accounts as provided in Article IX. He shall be authorized to sign checks in the absence of the Secretary-Treasurer.

Section 3 — The President-Elect shall, during the absence of the President, perform all duties of the President, and, if the office of the President becomes vacant, the President-Elect shall succeed to the presidency for the unexpired term. The President-Elect shall succeed to the presidency at the normal expiration of the President's term of office as provided in Article IV. The President-Elect shall plan the ASSOCIATION program for its regular annual meeting, under the supervision of the President as stipulated in Section 2 above.

Section 4 — The Secretary-Treasurer shall perform all duties usually incumbent upon these offices, edit and cause to be published the Proceedings of the annual meeting and other publications, in accordance with Article X, collect dues, pay ASSOCIATION bills on approval by the President, assume general charge of all monies belonging to the ASSOCIATION, render a financial account to members at the annual business meeting, and conduct mail voting procedures as authorized by the President. The Secretary-Treasurer shall be bonded by the ASSOCIATION to the sum of ten thousand dollars ($10,000) per annum. He shall receive a sum annually for clerical and other services, if funds permit, as determined by the Executive Council.

ARTICLE IV — ELECTION OF OFFICERS AND THE COUNCIL MEMBER-AT-LARGE

Section *1* — A nominating committee consisting of the three immediate past presidents shall be instructed by the President to prepare a slate of at least two names for the office of President-Elect and Council Member-at-Large, the retiring President to serve as Chairman. If the Nominating Committee desires, it may submit only the name of the incumbent Secretary-Treasurer for re-election. Additional nominations may be made from the floor at the annual business meeting. A majority vote, with a quorum present, shall be required for election; if no candidate receives a majority on the first ballot, the two candidates receiving the highest number of votes shall then be voted upon. Elections shall be by secret ballot.

Section 2 — Officers and the Council Members-at-Large shall be elected for one (1) year, extending from the close of the annual meeting at which they are elected to the close of the next annual meeting at which their successors are elected. If, for some unusual reason a quorum be not present at the election of officers — as provided in Article VIII, Section 1 — the incumbent officers and Council Member-at-Large shall remain in their respective positions for the ensuing year.

Section 3 — The President, President-Elect, and Council Member-at-Large shall not immediately succeed themselves in the same office, except as specified in Section 2 above. The Secretary-Treasurer may be re-elected from year to year at the pleasure of the membership.

Section 4 — Vacancies, except as provided in Article III, Section 3, shall be filled by the Executive Council pending the regular election.

ARTICLE V — WESTERN DIVISION

Section 1 — The Western Division will be represented on the Executive Council only as its members might be elected to it (Executive Council) in the regular course of events as National College Physical Education Association members.

Section 2 — The Western Division shall have one session at the National College Physical Education Association meeting whenever it is held in any of the thirteen western states, in place of their regular annual meeting, and the President of the Western Division shall be responsible to the President-Elect of the National College Physical Education Association for this program just as any section chairman is responsible to him for his program.

Section 3 — The purposes of the Western Division shall be consistent with the purposes of the National College Physical Education Association as stipulated in Article II of its constitution.

ARTICLE VI — SECTIONS

Section 1 — The ASSOCIATION may establish sections within its organizational structure to promote the activities of professional interest groups. Examples are: basic instructional programs; intramural athletics; teacher education; intercollegiate athletics, research; history of sport; and others.

Section 2 — The membership may authorize the establishment of any given section at a regular business meeting by a majority vote upon written application by twenty-five (25) current members stating the purpose and function of the proposed section and upon recommendation by the Executive Council — provided a quorum takes action as prescribed in Article VIII.

Section 3 — Each section shall elect its own officers consisting of a Chairman, Chairman-Elect, and Secretary at the annual section meeting. A Nominating Committee consisting of three (3) section members shall be appointed by the Chairman at least three months preceding the annual section meeting at which the section officers will be elected. The Nominating Committee shall prepare a slate of two (2) names for each office. Additional nominations may be made from the floor. A majority vote shall be required for election. If there are more than two (2) candidates and no candidate receives a majority on the first ballot, the two candidates receiving the highest number of votes shall then be voted upon. Elections shall be by secret ballot. Any person holding office in the ASSOCIATION must be an active member.

Section 4 — Section officers shall be elected for one year, extending from the close of the meeting at which they were elected to the close of the next annual meeting at which their successors are elected. Section officers shall not immediately succeed themselves in the same office.

Section 5 — The Chairman shall preside at all section meetings which shall be open to the entire ASSOCIATION membership. He shall supervise the program planning for all section meetings held during the annual meetings of the ASSOCIATION. He shall also be responsible for pursuing professional activities throughout the year which are pertinent to the interests of the section. He shall be responsible for the conduct of section activities in a manner consistent with the intent and stated provision of the ASSOCIATION's Constitution and By-Laws. By virtue of his office as Section Chairman, he shall serve as a member of the Executive Council of the ASSOCIATION.

Section 6 — The Chairman-Elect, during the absence of the Chairman, shall perform all the duties of the Chairman, and, if the office of the Chairman becomes vacant, the Chairman-Elect shall succeed to the chairmanship for the unexpired term. The Chairman-Elect shall succeed to the Chairmanship at the normal expiration of the Chairman's term of office. The Chairman-Elect shall plan the section program for its regular annual meetings under the supervision of the Chairman as stipulated in Section 5 above.

Section 7 — The Secretary shall keep minutes of all business transactions at section meetings. These minutes shall be passed along to each succeeding Secretary, in order that the continuity of section activity may be maintained. He shall be responsible for forwarding all papers and reports given at section meetings to the Secretary-Treasurer of the ASSOCIATION for consideration for publication in the PROCEEDINGS.

Section 8 — The ASSOCIATION may abolish a given section at a regular business meeting by a two-thirds (2/3) majority vote provided a quorum takes action as prescribed in Article VIII.

ARTICLE VII — MEETINGS

Section 1 — The ASSOCIATION and its Executive Council shall each hold at least one annual meeting at the time and place designated by the Executive Council.

Section 2 — Special meetings of the ASSOCIATION and/or the Executive Council may be called by the President upon authorization by the Executive Council.

ARTICLE VIII — QUORUM

Section 1 — A quorum to conduct ASSOCIATION business at its regular annual meeting, or by mail vote, shall consist of not less than fifteen percent (15%) of the current membership. No mail vote shall be valid after thirty (30) days from the date upon which the question was mailed by the Secretary-Treasurer to the members for action.

Section 2 — A quorum of the Executive Council shall consist of at least three-fifths (3/5) of the members, including the President, or the President-Elect duly authorized by the President to act for him.

ARTICLE IX — COMMITTEES

Section 1 — Committees shall be designated as President's Committees, Continuing Committees, Standing Committees, and Joint Committees. Any person holding office in the ASSOCIATION must be an active member.

Section 2 — President's Committees shall be appointed by the President and expire with his term of office.

Section 3 — Continuing Committees shall be authorized by the membership at regular business meetings, or by mail vote. Continuing Committee members shall be appointed by the President and approved by the Executive Council. A Continuing Committee is one whose assignment extends beyond the term of office for which the President is elected, but which deals with a specific project or problem of terminal nature. Such committees shall continue until discharged by official action of the membership at a regular business meeting, or by mail vote.

Section 4 — Standing Committees shall be authorized by the membership at a regular business meeting, or by mail vote. Standing Committee members shall be appointed by the President and approved by the Executive Council. A Standing Committee is one assigned a given task which, of necessity, extends indefinitely. Such committees shall follow the policy of rotating membership and number of members as determined by the Executive Council, with no person appointed for a period to exceed three (3) consecutive years. Standing Committees presently authorized by the ASSOCIATION are: Constitution; Finance; Foreign Relations; Historical Records; Membership; Necrology; Resolution; Nominations; Convention Program; Policies; Public Relations; Operating Codes; Research; and Legislative.

Section 5 — Joint Committees shall be authorized by the Executive Council and appointed by the President. A Joint Committee is one that deals with a specific project or problem in cooperative relationships with one or more associations or organizations.

Section 6 — Each Continuing Committee and Standing Committee shall prepare an operating code which is to be approved by the Executive Council.

Section 7 — All committees shall report at each annual meeting as determined by the Executive Council.

ARTICLE X — PUBLICATIONS

Section 1 — The official publication of the ASSOCIATION is the *PROCEEDINGS*, which contains a record of activities carried on throughout the year, culminating in the annual meeting.

Section 2 — The Secretary-Treasurer shall be responsible for editing and publishing the *PROCEEDINGS* as soon as possible after each annual meeting, and for the distribution of free copies to all members in good standing.

Section 3 — The Secretary-Treasurer shall arrange for the publication and distribution of such other materials as the Executive Council may direct.

ARTICLE XI — FINANCE

Section 1 — Monies obtained by the ASSOCIATION shall be allocated to the: (a) operating budget; or (b) permanent fund.

Section 2 — The operating budget shall contain those funds deemed necessary by the Executive Council to carry on the work of the ASSOCIATION throughout the fiscal year, including the annual meeting.

Section 3 — The permanent fund represents those monies that accumulate from time to time in excess of the operating budget. The Secretary-Treasurer shall invest these sums upon recommendation by the Finance Committee (as defined in the following Section) and as approved by the Executive Council. The Executive Council may authorize the withdrawal of funds from the Reserve Account for use as the Executive Council sees fit.

Section 4 — A Standing Committee, known as the Finance Committee and conducting its affairs under the direction of the Executive Council, shall: (a) prepare annually the operating budget; and (b) make recommendations to the Executive Council on the investment of surplus funds.

Section 5 — The fiscal year shall extend from September 1st through August 31st.

Section 6 — In the event of dissolution of the National College Physical Education Association for Men, all unencumbered funds will be forwarded to the American Association for Health, Physical Education, and Recreation, Washington, D.C.

NCPEAM POLICIES

All current policies formally adopted by the Association to govern its affairs are included in this section. For the purposes of the Association, a policy may be defined as an agreed course of action to be followed in conducting the affairs of the organization.

In many cases, the provisions of the Constitution and By-Laws of the Association are not definitive. These provisions are implemented into action through the medium of policies and procedures. These policies and procedures tend to give continuity and uniformity to Association activities over a considerable period of time, irrespective of the changes that occur continuously among its officers and members. It is also through the medium of policies and procedures that the Association gears itself to the fluctuations of the times.

ACHIEVING ASSOCIATION PURPOSES

1. Association Objectives

   The Association shall:

   a. Use every medium of influence to improve present programs of physical education in the schools at all levels to the end that the boys and girls and all citizens of the nation have adequate opportunity to develop desirable attitudes, knowledge, and skills in physical education.

   b. Support all effects aimed at establishing desirable athletic practices at each educational level to the end that physical education can make its maximum contribution to the welfare of the participant.

   c. Engage in activities looking toward the promotion of research designed to improve the quality and scope of programs of health education, physical education, and recreation through (a) research activities of the Association committees; (b) Association endorsed studies by selected graduate students in colleges and universities; (c) collaboration with other organizations conducting meetings and in the publications of the Association; and (d) serving as a clearing house for research in college health education, physical education, and recreation.

   d. Commit itself and its membership to a policy of aggressively seeking to recruit into physical education an increasing number of qualified young people who are interested in the behavioral sciences, in the humanities, and in communication skills. Further that such young people should be permitted modification of their undergraduate curricula and be guided into graduate programs adapted to developing their special skills in the interests of research, philosophy, and interpretation related to physical education. The National College Physical Education Association for Men shall assign to a standing committee or to a special committee the task of conducting a year-round program designed to implement this resolution and to discover and report specific instances in which progress had been made with respect to its execution.

   e. Conduct a biennial poll of all active members to obtain ideas for new policies or revisions.

2. Coordinating with Other Agencies

   The Association shall:

   a. Cooperate with other education agencies to improve professional preparation programs in health, physical education, and recreation.

   b. Cooperate with other educational agencies in promoting the objectives of health education, physical education, and recreation.

   c. Call upon all school and college administrations to secure properly qualified professional personnel to teach, coach, and administer physical education and athletic programs.

d. Cooperate with other educational organizations in sponsoring and/or having official representation at conferences in the fields of health education, physical education, and recreation.

e. Coordinate whenever possible the work of committees and projects with similar committees from other professional organizations.

f. Cooperate with other professional societies in the formulation of education standards and in recommending them to colleges and universities for the development and control of programs of health education, physical education, and recreation.

3. Basic Instruction Program

The Association shall:

a. Support the position that the practice of substituting band or ROTC for the physical education program must be vigorously opposed.

b. Encourage colleges and universities throughout the country to abolish the practice of granting physical education credit for military service.

c. Encourage colleges and universities to include in the basic instruction program a depth of emphasis on the body of scientific knowledge, on the relationship of exercise to the biological development of the human organism, and on movement as a medium in the educational process for total development of the individual.

ADMINISTERING ASSOCIATION AFFAIRS

1. Membership

The Association shall:

a. Seek to retain new members to better acquainting them with the traditions and purposes of the organization, and seek ways for them to participate actively in the affairs of the Association.

b. Endeavor to maintain liaison with emeritus members by utilizing their experience and zeal through participating in assignments to Association affairs and programs.

c. The membership not previously paid will be billed for dues, one month after the Annual Meeting has concluded.

2. Annual Meeting

The Association shall:

a. Have as the primary purpose of the regular meetings of the Association to provide the largest number of members with opportunities to discuss the major areas of the college program of health education, physical education, and recreation. These meetings shall be planned so as to include wide participation among members.

b. Select the dates and location of the annual meeting so as to encourage maximal attendance by the members of the Association. To equalize, over a period of years, the distance traveled to meetings of the Association residing in the various sections of the country, the principle of periodic rotation among cities shall be given consideration in the selection of the site for the annual convention.

c. Consider site locations for the annual convention that place no restriction on Association members with reference to housing, attendance at meetings, or other factors tending to divide the membership.

d. Limit the length of the official convention to three days. This does not prevent any group from meeting before the convention, but group meetings shall not be included in the official program, nor shall any papers or summaries of pre-convention meetings be a part of the *PROCEEDINGS*.

e. Require papers submitted for presentation to be limited to the basic essentials of the topic. In no case shall papers exceed 2000 words, including committee reports. The editor shall have authority to make deletions or changes necessary to conform to his policy.

f. Require that only abstracts of prepared papers be presented at annual meetings, thus allowing more time for discussion.

g. Take no official action to assist special interest groups in scheduling informal meetings.

3. Committees

The Association shall:

a. Require each committee to submit its operating code to the Operating Code Committee, who will in turn request that the Constitution Committee check each code to see that it is in keeping with the constitution.

b. Rotate committee membership in order to involve as many members as possible.

c. Strive to seek committee representatives from institutions in all areas of the nation.

d. Provide a fund for use by the President in executing his duties. Normally all of his expenses shall be borne by his institution, therefore, this fund is to serve only as an emergency fund.

4. Publications

The Association shall:

a. Disseminate deliberations of the official meetings through the published *PROCEEDINGS* and through reports covering such special projects as may be authorized by the Association.

b. Carefully edit all publications of the Association to make certain that they represent a high quality of scholarship and follow approved methods of conducting and reporting educational research.

c. Not accept advertising or other extraneous material for publication in the literature of the Association.

d. Collaborate with the National Association for Physical Education of College Women in the publication of *QUEST*.

e. Display the following statement on the inside back cover of the *PROCEEDINGS:*

Non-profit organizations may secure reprints of *PROCEEDINGS* articles by paying cost-plus handling charges. Additionally, said organizations must secure the author's permission and then may request the privilege of reprinting and/or translating articles, giving appropriate credit to the author and the *PROCEEDINGS*.

However, profit agencies must pay the "going rate" for these privileges after receiving appropriate permission, with the revenue accruing to the National College Physical Education Association for Men. Profit making agencies shall be interpreted to include an author who receives royalties from a publication.

5. Projects

The Association shall:

a. Endorse only those studies which benefit the profession and the Association.

b. Place in the hands of the appropriate committee requests by students seeking endorsement of the Association for doctoral studies. Procedures to implement this policy will be included in the operating code of the committee.

c. Sponsor and conduct projects as approved by the Association. Such projects should involve little or no expense. They must be of a nature that their business can be readily transacted by mail, and they should have some beginning and ending.

6. Historical Records
   The Association shall:
   a. House National College Physical Education Association for Men historical documents in a designated college library.
   b. Annually give two copies of the *PROCEEDINGS* to the library designated by the Association to house its historical materials.
   c. Preserve its historical records by duplicating the original copies. Duplicate copies can then be distributed upon request from the library designated by the Association to house its documents.

7. Delimitation of Function
   The Association shall:
   a. Not serve as an accrediting agency to evaluate specific programs of health education, physical education, or recreation in individual institutions of higher education.
   b. Not participate in activities concerning the relationship of a particular college to its employees in such matters as employment, promotion, tenure, dismissal, or academic freedom.

8. Maintenance of the Policy Statements
   The Association shall:
   a. Assign the Secretary-Treasurer to be responsible for maintenance of the policy book. He shall make its contents, or parts thereof, available to officers and members whenever the need arises.
   b. Direct the Secretary-Treasurer to include new policies in the policy book or to revise or delete those previously established as approved at a regularly scheduled business meeting at the annual convention. Action on policies may be taken at any regular business meeting of the Association without the necessity of prior notice.
   c. The Association's policies shall be printed in the *PROCEEDINGS* annually.

Emeritus Members 1970

Legend:

* Attended 1970 Convention

(1) Past President

(2) Past Secretary-Treasurer

A

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*ANDERSON, BRUCE D., Ph.D. (1965)
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---

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TERWEY, KENNETH, M.Ed. (1969)
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